

SECOND ANNUAL REPORT

OF THE



*CONSUMPTIVES'*  
*HOSPITAL*  
*DEPARTMENT*

OF THE CITY OF BOSTON

FOR THE YEAR ENDING

JANUARY 31, 1908









BIRD'S-EYE VIEW OF PROPOSED CONSUMPTIVES' HOSPITAL AT MATTAPAN.

SECOND ANNUAL REPORT  
OF THE  
CONSUMPTIVES' HOSPITAL  
DEPARTMENT

OF THE  
CITY OF BOSTON

FOR THE YEAR ENDING JANUARY 31, 1908



BOSTON  
MUNICIPAL PRINTING OFFICE  
1908

CITY OF BOSTON.

CONSUMPTIVES' HOSPITAL DEPARTMENT.

Office, 1151 TREMONT BUILDING.

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BOARD OF TRUSTEES.

EDWARD F. MCSWEENEY, <i>Chairman</i> ,	term expires April 30, 1911.
MRS. J. J. O'CALLAGHAN,	" " 1910.
DR. JAMES J. MINOT,	" " 1910.
ISABEL F. HYAMS,	" " 1909.
JOHN E. POTTS,	" " 1908.
DR. JOHN F. O'BRIEN,	" " 1908.
HERBERT F. PRICE, <i>Secretary</i> ,	" " 1912.

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*Superintendent.*

SIMON F. COX, M.D.

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VISITING MEDICAL STAFF.

*Chief of Staff.*

EDWIN A. LOCKE, M.D.

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*First Assistant.*

TIMOTHY F. MURPHY, M.D.

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*Pathologist.*

WILLIAM T. COUNCILMAN, M.D.

# OUT-PATIENT DEPARTMENT.

13 Burroughs Place.

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## SUPERINTENDENT.

SIMON F. COX, M.D.

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## VISITING MEDICAL STAFF.

### *Chief of Staff.*

EDWIN A. LOCKE, M.D.

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### *First Assistant.*

TIMOTHY F. MURPHY, M.D.

---

### *Second Assistant, Director of Out-Patient Clinic.*

CLEAVELAND FLOYD, M.D.

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### *Assistant Physicians.*

BRADFORD KENT, M.D.

HENRY I. BOWDITCH, M.D.

LOUIS MENDELSON, M.D.

---

### *Laryngological Assistant.*

JOHN T. SULLIVAN, M.D.

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### *Superintendent of Nurses.*

ELISABETH P. UPJOHN.

AN ORDINANCE CREATING A CONSUMPTIVES' HOSPITAL DEPARTMENT, AND REPEALING CHAPTER 6 OF THE ORDINANCES OF 1903, AND AMENDING SECTION 1 OF CHAPTER 2 OF THE REVISED ORDINANCES OF 1898.

*Be it ordained by the City Council of Boston as follows :*

SECTION 1. The Consumptives' Hospital Department shall be under the charge of a board of seven trustees, who shall be legal residents of Boston, and at least two of whom shall always be women, to be appointed by the mayor. During the current year one of said trustees shall be appointed for the term of five years, two for the term of four years, one for the term of three years, two for the term of two years, and one for the term of one year, beginning with the first day of May in the year 1906, and hereafter in the year in which any term or terms shall expire, a trustee or trustees shall be appointed for the term of five years, beginning with the first day of May in the year of appointment. Any vacancy occurring among said trustees shall be filled by appointment of a trustee as aforesaid for the remainder of the term. Said trustees shall serve without compensation, but all expenses reasonably incurred by them in the performance of their duty shall be paid, if approved by a recorded vote of the board of trustees. They shall organize the first day of May in each year, or as soon thereafter as may be, by the choice of a chairman, who shall be one of their number, and of a secretary, who may, or may not, at their discretion, be one of their number. No trustee, nor any person in the employ of said trustees, shall be interested in a private capacity, directly or indirectly, in any contract or agreement for labor or for articles furnished for said department. Said trustees shall have charge of the expenditure of one hundred and fifty thousand dollars, to be raised by a loan heretofore authorized, and shall have authority to purchase land suitable for such a hospital.

The said trustees shall have authority to erect upon said land and to furnish in a suitable manner a building or buildings suitable for a consumptives' hospital, the total expenditure for such pur-

poses not to exceed the amount of said loan. They shall, after the erection and furnishing of said building or buildings, have charge of the same and the care and maintenance thereof, shall purchase all food and other supplies needed therefor, shall make all needful improvements to the lands and grounds connected with said hospital, shall have charge of all real estate held for purposes connected with said hospital, and pay, or cause to be paid, to the city collector any income thereof.

SECT. 2. Said trustees shall admit to said consumptives' hospital only persons who have been inhabitants of Boston for at least two years preceding the date of their application for admission to said hospital, preference to be given to those persons having a legal settlement in Boston. The trustees shall have power to make all necessary rules and regulations for the carrying on of said hospital and for the admission of patients. The charges for the support of such inmates of said hospital as are of sufficient ability to pay for the same, or have persons or kindred bound by law to maintain them, shall be paid by such inmates, persons or kindred at a rate to be determined by the trustees of said hospital, and all amounts so received shall be paid to the city collector.

SECT. 3. Said trustees shall, in their annual report, include a statement of the conditions of the hospital, the number of its inmates, the admissions thereto and the discharges therefrom, and the deaths therein during the year.

SECT. 4. Chapter 2 of the Revised Ordinances of 1898 is amended in section 1 by inserting after the words "Bath Trustees" the words "Consumptives' Hospital Trustees."

SECT. 5. Chapter 6 of the Ordinances of 1903 is hereby repealed.

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#### CHAPTER 189 OF THE ACTS OF 1906.

#### AN ACT RELATIVE TO THE CARE OF TUBERCULOSIS PATIENTS IN THE CITY OF BOSTON.

*Be it enacted, etc., as follows :*

SECTION 1. The trustees of the new hospital for consumptives in the city of Boston, pending the erection of said hospital, are hereby authorized to hire not more than one hundred beds in private hospitals, and to pay not more than five dollars a week

each for the same, for the use of needy tuberculosis patients who are residents of the said city.

SECT. 2. This Act shall take effect upon its passage.

[*Approved March 24, 1906.*

#### CHAPTER 248 OF THE ACTS OF 1907.

AN ACT RELATIVE TO THE HIRING OF BEDS IN PRIVATE HOSPITALS FOR TUBERCULOUS PATIENTS IN THE CITY OF BOSTON.

*Be it enacted, etc., as follows :*

SECTION 1. Section one of chapter one hundred and eighty nine of the acts of the year nineteen hundred and six is hereby amended by striking out the word "five" in the fifth line, and inserting in place thereof the word :—eight,—so as to read as follows :—*Section 1.* The trustees of the new hospital for consumptives in the city of Boston, pending the erection of said hospital, are hereby authorized to hire not more than one hundred beds in private hospitals, and to pay not more than eight dollars a week each for the same, for the use of needy tuberculous patients who are residents of the said city.

SECT. 2. This act shall take effect upon its passage.

[*Approved March 28, 1907.*

#### CHAPTER 225 OF THE ACTS OF 1908.

AN ACT TO AUTHORIZE THE TRUSTEES OF THE NEW HOSPITAL FOR CONSUMPTIVES IN THE CITY OF BOSTON TO HIRE BEDS IN PRIVATE HOSPITALS.

*Be it enacted, etc., as follows :*

SECTION 1. The trustees of the new hospital for consumptives in the city of Boston are hereby authorized to hire beds in private hospitals for the use of needy tuberculous patients who are residents of said city, until the said new hospital is completed ; but the said beds shall not exceed one hundred in number, and the price paid therefor shall not exceed eight dollars a week for each bed.

SECT. 2. This act shall take effect upon its passage.

[*Approved March 14, 1908.*

ANNUAL REPORT  
OF THE  
CONSUMPTIVES' HOSPITAL DEPARTMENT

FOR THE YEAR 1907-1908.

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HON. GEORGE A. HIBBARD,  
*Mayor of the City of Boston :*

SIR, — The report of the Consumptives' Hospital Department for the year ending January 31, 1908, is respectfully submitted herewith.

As provided by law the Board of Trustees met on May 3, 1907, and organized for the year by the election of Edward F. McSweeney, Chairman, and Herbert F. Price, Secretary.

Following the policy adopted when the Board was organized, after conference with the leading physicians in Boston, specialists in tuberculosis, that the patients to be cared for by this department should be those in the advanced stages, who, because of the progress of their disease, could not be admitted to the State Sanatorium at Rutland, consideration of definite plans to accomplish these ends was taken up early in the year.

As the work proceeds, it is manifest there is a natural division of the patients into two great classes, those requiring bed treatment, and those not requiring bed treatment.

The first class can be further divided into those requiring bed treatment all the time, and those requiring bed treatment part of the time. Included in this first sub-division are the very far advanced and the dying patients, while the second sub-division comprises those patients in the less advanced

stages of the disease, who are able to be out of bed but a few hours during each day, and also those patients who, because of some acute complication, must remain in bed for varying periods of time, from a few days to several weeks.

The second class, who do not require bed treatment, comprises all those patients in such stages of the disease as would prevent admission to the State Sanatorium at Rutland, but not so far advanced as to prevent the patient being about during the day.

Consideration of the patient and the stage of his disease determines the type and character of the building suitable for his care.

To provide for the patients of the first class, the very far advanced and the dying, the Trustees decided to erect pavilion wards, of two stories, so arranged to insure comfort to the patient; of easy and effectual administration; of such construction as to secure fire-proof conditions and absolute cleanliness, and so situated to obtain the maximum amount of sun and fresh air.

For the second class of patients, those who do not require bed treatment, camps and open cottages are to be provided.

The provision for beds in private hospitals has prevailed as during the previous year, and hospital care has been extended to many suffering patients. Patients are admitted to these hospitals by our superintendent. This will continue while the appropriation permits, and until such time as the accommodations of the hospital at Mattapan render it unnecessary.

Detail of the study and development of the hospital buildings was begun with the architects, Messrs. Maginnis & Walsh, last spring, and the work was sufficiently advanced by autumn to permit calling for bids for the erection of the first ward building, corridor, the power house and the connecting tunnel, which are now being constructed, and will cost, exclusive of plumbing, \$124,977.85.

The room intended for the future dynamos, refrigerating

machinery, machine and repair shop in the power house is to be used for a temporary laundry.

The study of the second class of patients led to the establishment of an Out-Patient Department at 13 Burroughs place in September last. The experience gained through this Out-Patient Department has shown clearly the wisdom for the establishment of day camps and open cottage buildings. It has also shown the necessity and importance of home care classes and personal daily instruction.

During the summer months the house at 13 Burroughs place was leased, renovated, and opened as an Out-Patient Department on September 11, 1907. In the beginning examinations were held three mornings each week. Later a fourth examination morning was added and set aside especially for children. A department of visiting nurses has been established under the supervision of Miss Elisabeth P. Upjohn. The nurses assist at the examination at the Out-Patient Department, and do the home nursing and visiting.

It is the intention to make the Out-Patient Department the ~~clearing-house~~ for all tuberculosis work, and all patients coming under the care of this department will be recorded here.

The social aspect forms a very important item in the care of the patients and adds very materially to the work of the nurse. Many intricate problems are being studied in co-operation with the social and charitable organizations throughout the city, and are being slowly worked out.

During the summer past, and until February 1 of this year, the Boston Association for the Relief and Control of Tuberculosis maintained a day camp for consumptives on the site at Mattapan.

A day camp at Mattapan for 200 patients to continue this work is now being built, which will in future be conducted by the Trustees.

Plans for an open cottage building to be erected at Mattapan are under consideration and study.

The day camp and the open cottage are designed for the care of class two patients. The day-camp patient will return to his home each evening, while sleeping quarters will be provided in the open cottage for those patients whose homes are not suited to the home care of the patient.

Considerable work has been done at Mattapan in the line of improvements, and much more remains to be done.

The farmer's cottage has been renovated, bath rooms have been added, steam plant installed, and the building painted inside and outside. The building has been wired for electricity, and will be used for the housing of male help.

Contracts have been let for the building of the main sewer connecting with the sewer on River street, but are not completed; an amount has been asked for this year for the extension of this sewer to ward buildings. Further extension will be necessary as the hospital develops.

Contract has been let for constructing a service road, and it has been partially completed. Macadam surfacing is yet to be done, and drains and catch basins need to be installed.

The water mains have been partially laid and will be further extended when the roadway has progressed sufficiently to receive them. Plans are under consideration for various land drains on the premises intended to embrace a scheme so planned that small amounts can be done from year to year as demanded by the growth of our buildings. As it is unlawful to drain surface water into the main sewer, a considerable sum must be expended to carry drains to the river, several hundred feet away. If a suitable provision for surface drainage existed in River street, it would be possible to utilize this, but as this is not so, it means considerable expense for this department to extend drains to the river.

Provision for these items has been asked in this year's appropriation.

As the head waters of the Mattapan brook are located in the woodland of this site, some provision of drainage should be made in order that we may utilize this tract of land.

This has been taken up with the Sewer Department with request for its improvement.

General educational work has been continued. Large sheet posters and small tin signs are displayed prominently about the city, calling attention to the dangers from spitting, and in short space give instructions how to prevent contracting the disease. The educational work of the nurses has been wonderful. It not infrequently happens that a single patient in a neighborhood may be the means of spreading knowledge of the need of sanitary surroundings, pure air and nourishing food, and there is no way to calculate how much good this work is doing among those who are not afflicted with the disease, but whose mode of living and surroundings would, lacking this educational work, make them possible victims of the disease.

Appended hereto are reports from Dr. Edwin A. Locke, Chief of our Medical Staff; Dr. Simon F. Cox, Superintendent, and Miss Elisabeth P. Upjohn, Superintendent of Nurses of the Out-Patient Department, explaining the work in detail. This work of fighting tuberculosis is new, and we believe that Boston is now showing the way for the rest of the United States, and for this reason we have encouraged the chief of the medical staff to go more into detail as to the scope and progress of this work than will be necessary in subsequent reports.

The general plan of administration consists of a medical staff, nursing staff and a general superintendent.

The medical staff consists of a chief of staff and several assistants. Under the direction of one head all the medical work of Hospital, Day Camp, Out-Patient Department and classes and home cases will be done.

The nursing staff at the present time includes only the Out-Patient Department, and the work extends to the home cases through the Out-Patient Department.

The nurses are under the immediate supervision of a superintendent of nurses, who is responsible to the superintendent.

As the ward buildings, camp and open cottages become ready for patients, further nursing provision will be adopted in the establishment of a nursing department at Mattapan.

The superintendent, the executive officer of the Board, is the general superintendent of the Consumptives' Hospital Department, and is responsible to the Board of Trustees.

Tables are appended showing the financial status, and other items bearing on the work at Burroughs place and patients in hospitals. Work will be pushed on the building now ready for contract. A second ward building will be soon ready for advertisement for bids.

In our requests for the ensuing year we have asked for \$235,000 for building purposes. We earnestly hope that this amount may be granted in order to extend the work we have begun. Without this additional sum this year it will be impossible to build a domestic building, which is to contain the kitchen, storerooms, dining rooms for patients, nurses, domestics, etc., and sleeping rooms for employees, but it will be necessary to build a cheap wooden structure for this purpose, which will not only not be suitable and inadequate, but must be torn down as soon as the permanent building is erected and the money used to build it then wasted.

The future hospital will need besides the domestic building many more wooden buildings, an administration building, a nurses' home, laundry, chapel, pathological building, morgue, and other buildings.

We have further asked for \$140,000 for this year's maintenance.

(Signed)

EDWARD F. MCSWEENEY, *Chairman.*

MRS. J. J. O'CALLAGHAN.

JAMES J. MINOT, M.D.

ISABEL F. HYAMS.

JOHN E. POTTS.

JOHN F. O'BRIEN, M.D.

HERBERT F. PRICE, *Secretary.*

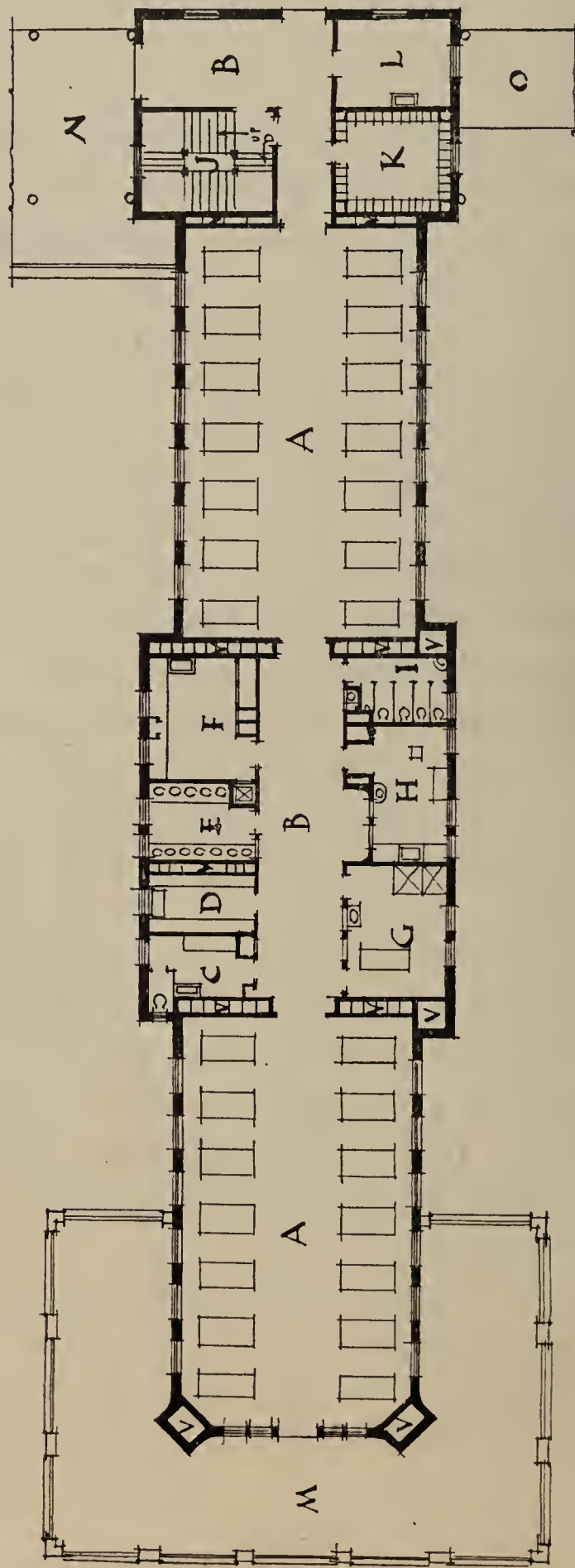
## THE SITE AT MATTAPAN — THE BUILDINGS, PRESENT AND CONTEMPLATED.

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The hospital site is the Conness estate on River street, Mattapan, and comprises about fifty-five acres of land, of which about two-thirds are woodland. Bordering on River street and extending backward to a depth of about eight hundred feet is a level piece of tillage land of about six acres. Here are located the Conness house, the barn and farm buildings and the farmer's cottage. The main house will be used by the Superintendent and also temporarily for nurses and business offices. Trees bound the River-street border and the avenues leading to the house and barn; on this land is placed the power house at such a level that any building in any part of the property can be heated from it. A large grove of old white oaks stands at the foot of a slightly rising piece of land whose top is studded with large boulders of pudding stone; around and between these are scattered birch and oak trees. On this rising piece of land are to be erected day camp and open cottages. Above and beyond this rising land is a level pasture which extends westward to the woodland. This piece is upward of five acres and is the site of the future hospital buildings. The ward buildings are to be two-story pavilions connected by open corridors. The scheme comprehends Ward Buildings, Administration, Domestic and Pathological Buildings, Chapel, Laundry, Nurses' Home and Power House.

The buildings are designed by Maginnis & Walsh. Their design is as simple as possible, and throughout the uses to which each building is to be put and economy of administration have been considered, and not architectural display.

LEGEND	
A	WARDS
B	CORRIDORS
C	STORE CLOSET
D	LINEN CLOSET
E	BOWL ROOM
F	SERVING RM
G	BATH ROOM
H	UTENSIL RM
I	TOILET ROOM
J	STAIRCASE
K	LOCKER RM
L	LABORATORY
M	PIAZZA
N	CORRIDOR
O	TUNNEL
V	VENT DUCTS



FLOOR PLAN OF WARD BUILDING.

The first open ward building, its corridor and power house, with a tunnel connecting the hospital group, are now being built, and they show the type of design and construction to be used.

The walls of ward building power house, together with the foundation walls of corridor and tunnel, are of reinforced concrete, surfaced with cement. The main partitions are of terracotta blocks, the minor ones of metal studding; the inside walls are to have a wainscot of equal parts of Portland and Keene cement seven feet high; the walls above this and the ceilings are of a fibre plaster; both to be laid on metal lathing. The cellar floors are to be concreted. The floor beams are steel, those of the first receiving additional support from steel columns resting on the cellar floor, while the second story floor beams of the wards rest on the outside walls only. The floors are constructed of reinforced concrete slabs laid on the steel beams. The floors in the wards and connecting hallway are to be finished with heavy linoleum cemented down directly on the concrete surface. The floors in administration rooms are to be terrazzo, as are those of that part of the connecting corridors that are inside the ward building; the roofs are to be tar and gravel, laid on wooden construction.

The doors are without panels, and there is no wood finish about the door and window openings.

The toilet room, and the utensil room, containing hopper, sterilizer for bed pans and sputum cups, dirty clothes' bags, broom closet, etc., are separate rooms and have a special exhaust ventilation. The serving room contains a hot steam table, sink, dish sterilizer, refrigerator, etc., and is connected by an electric dumb waiter with the basement. There is a large wash room for patients with a special place for cleansing the mouth and teeth. The linen rooms are fitted with removable slat shelves. The bathroom contains ample provision for bathing patients quickly. Wash bowls are provided at

various places so that the physicians and nurses may have every opportunity of cleansing and disinfecting their hands.

A galvanized-iron clothes chute with air-tight doors, so that it may be flushed and sterilized with formaldehyde gas, leads to the basement; air-tight doors and window shutters are provided for the locker room, where the patients' clothes in daily use will be kept, and for the storeroom for clothes in the basement for the same purpose.

The stairs are of iron with slate treads. On the roof of this ward building is a mattress room, with glass roof and sides and abundant ventilation by louvres; here the mattresses and pillows can be sunned and aired. The doors and louvres can be closed air-tight and the room with its contents be disinfected by formaldehyde gas.

At the southerly end of the building is a broad wooden piazza. There is also an iron fire-escape at this end.

There are two wards of fourteen beds each on both stories with the administration rooms between them. This gives but relatively few patients in one room, and consequently the patients are less disturbed by one another, while one-half the beds are much nearer the service rooms than they would be with the administration at one end of the building.

The basement of the connecting corridors serves as an avenue of communication between all the buildings of the hospital group, and contains the main heating and plumbing pipes, the electric light and gas mains, etc. The open corridors, first and second stories, have a tight wooden floor covered with canvas. They can be closed on the north side by removable screens during the winter. They are to be used as open piazzas for patients in, or out of bed. These buildings are designed for the more advanced cases of consumption.

#### POWER, HEATING AND VENTILATING PLANT.

The power, boiler, heating, ventilating and electrical work have been designed by Hollis French & Allen Hubbard.



• EAST ELEVATION •

CITY OF BOSTON  
 WARD BUILDING FOR  
 NEW CONSUMPTIVES HOSPITAL  
 MATTAPAN - MASSACHUSETTS  
 MAGINNIS - WALSH & SULLIVAN ARCHTS  
 BOSTON - MASS & LOS ANGELES - CAL.



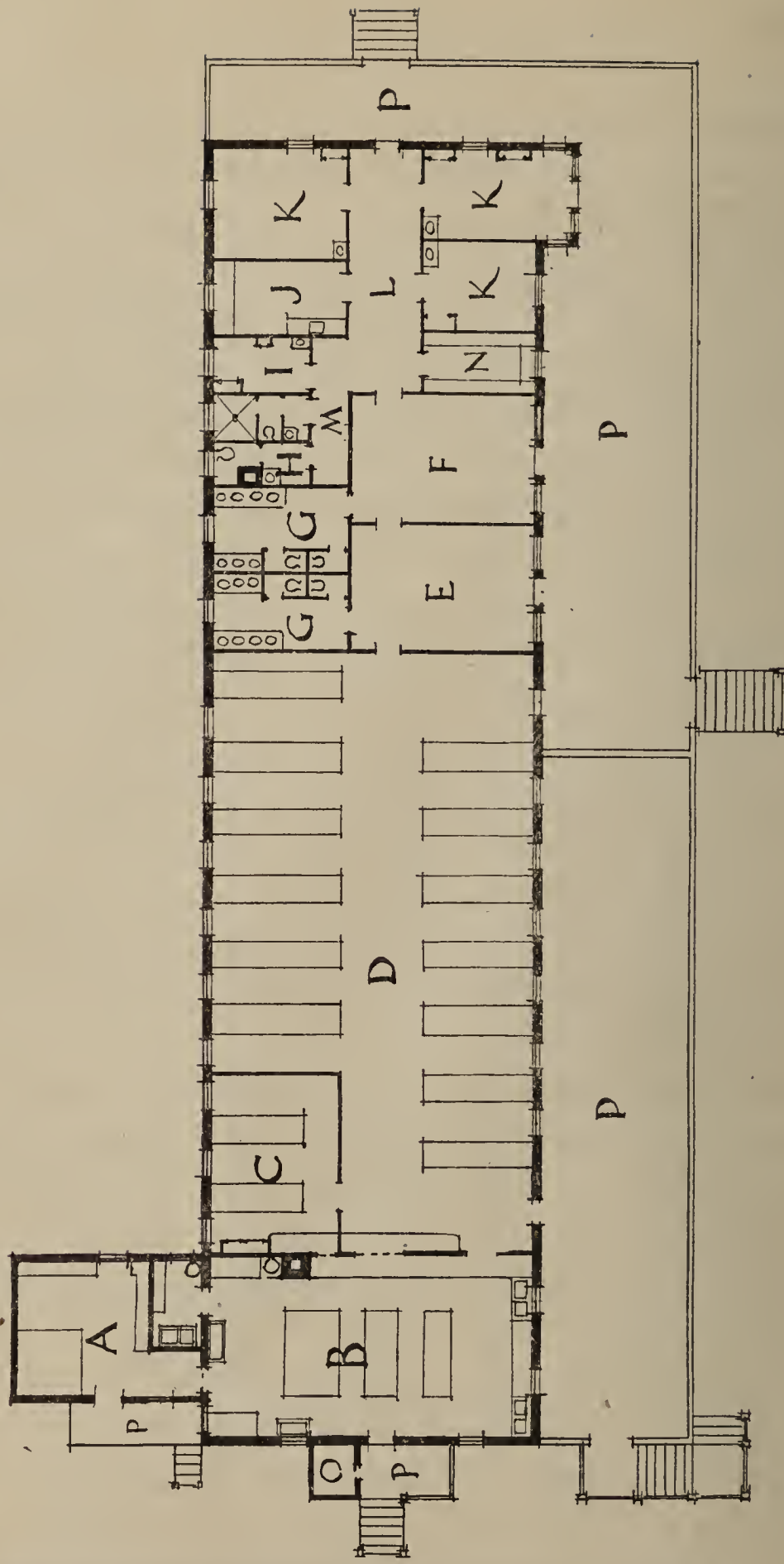
This includes a power house, distribution mains and heating and ventilating apparatus for ward and other buildings. The power house is designed for four 72-inch horizontal tubular boilers of 100-horse power each; only two to be installed now. By the removal of a temporary wall the power house can be constructed twice its present size. The boilers will at first be run at about 50 pounds pressure, but are constructed to carry 100 pounds, as will be needed later. There is an engine and dynamo room for future use, which will now be used for a laundry. There is an incinerator room for burning rubbish, sputum, etc. The coal pocket is so arranged that the coal can be dumped directly through holes in the top. The capacity is 300 tons. The coal will fall by gravity from the bins into the coal charging car.

The power house and ward buildings are connected by a tunnel. In this is a 5-inch steam main, run at 50 pounds pressure, to be used for cooking, heating water, etc., and to be reduced by valves to 5 pounds for heating; a 12-inch low pressure main will be put in later to utilize the exhaust steam from the future engines.

The heating and ventilating apparatus in the ward buildings consists of plenum and exhaust fans, with automatic temperature control. The administration part of the building is to be heated and ventilated constantly at 70 degrees. A special foul air exhaust system is provided for the toilets and utensil (bed pan, hopper, etc.) rooms. The wards have a large supply of radiation and air so that they may be used with the heat turned off and windows open, and then quickly heated when patients are dressing, or kept warm all day as desired. Each ward can be separately controlled. The heating and ventilating system for a domestic building, to contain kitchen, etc., dining rooms and sleeping quarters for domestic service, has not been designed yet. The heating for the day camp and other out-lying buildings will be furnished from the boiler house.

# LEGEND

- A STORE ROOM
- B KITCHEN
- C PRIVATE DINING RM
- D DINING ROOM
- E MENS' ROOM
- F WOMENS' ROOM
- G TOILET ROOM
- H LAVATORY
- I THROAT EXAM. R.M.
- J LABORATORY
- K OFFICES
- L CORRIDOR
- M PASSAGE
- N LINEN ROOM
- O COAL BOX
- P PIAZZA



FLOOR PLAN OF DAY CAMP.

## ELECTRICAL WORK.

Until the hospital has reached a size to warrant making its own electricity for light and power the Edison Company's service will be used. The street wires will enter the power house, where the necessary transformer and switchboard will be placed. The wiring mains will be carried from here to the ward and other buildings through the tunnel, but to the day camp and other outlying buildings on poles. The construction work will be as fire proof as possible, all wires being run in iron conduits, except in the laundry and tunnel, where this will not be advisable. The arrangement of lights is simple. In the wards lights are provided at each bed, to be used if needed. Ordinarily the wards will be given a general illumination by inverted clusters, which will light the room indirectly by reflection from the ceiling. The ventilating fans, the dumb waiter, etc., will be run by electric motors. The hospital will be wired for a house telephone system and piped for vacuum cleaning.

## DAY CAMP AND WOODEN WARD BUILDING.

The day camp is a wooden building one hundred and fifty feet long, not finished inside, except where necessary to protect water pipes from freezing. It contains a dining room, seating 180 patients, a small nurses' dining room, a kitchen and storeroom, a room for men and women to sit in when the weather is bad, an office, examining rooms, toilet rooms, and room with bed, if needed. On the southerly side is a broad open piazza. The building is heated by steam and lighted by electricity. The open cottage building for men is one story high and faces south. All along this side of the building is a wide open piazza. In the centre is a sitting room, locker room, toilet, wash and bathroom, a nurses' room and a small ward for patients who may be temporarily too sick to be in the larger and open wards. On either side of this central part is a ward with the side towards the south open.

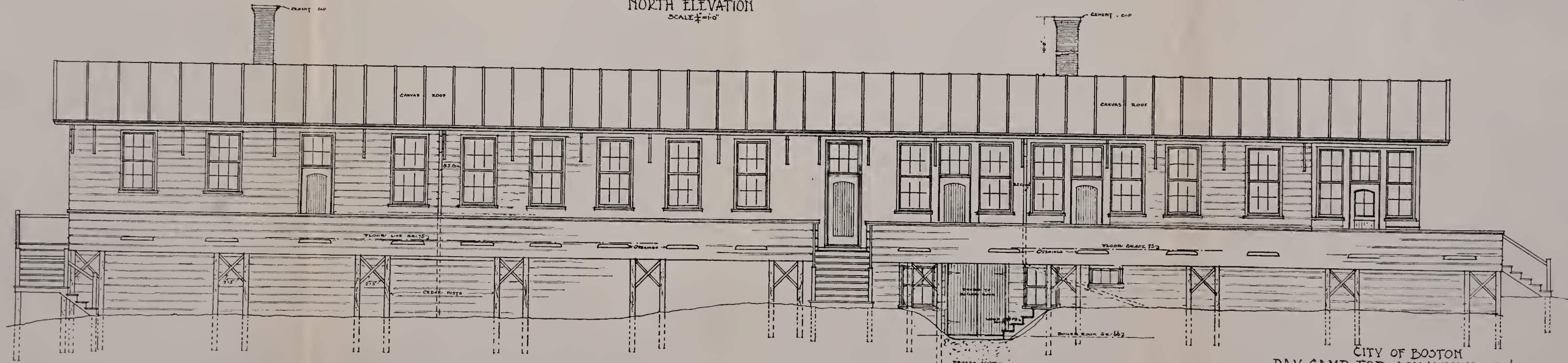
These patients are to have their meals at the day camp, close at hand.

The patients in this building are the least advanced cases, and will be transferred to and from the main hospital wards as their condition requires and permits.

Eventually other wards of this type should be constructed for men and for women.



NORTH ELEVATION  
SCALE  $\frac{1}{4}'' = 1'-0''$



- SOUTH ELEVATION

CITY OF BOSTON  
DAY CAMP FOR CONSUMPTIVES' HOSPITAL  
MATTAPAN MASS  
MAGINNIS AND WALSH ARCHITECTS — BOSTON MASS & LOS ANGELES CAL



REPORT OF THE MEDICAL STAFF.

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BOSTON, January 31, 1908.

*To the Trustees of the Boston Consumptives' Hospital :*

I respectfully submit herewith the annual report of the Staff of the Boston Consumptives' Hospital for the year ending January 31, 1908, together with such recommendations as seem to me necessary for immediate relief and for future development.

THE ORGANIZATION OF A MUNICIPAL CAMPAIGN  
AGAINST TUBERCULOSIS.

The facts regarding the nature of tuberculosis and its mode of dissemination are now too well known to merit discussion. We recognize it as an infectious, communicable disease affecting all ages, but especially prone to attack those in early adult life. It causes more deaths than any other disease except pneumonia, and a far greater proportion of invalidity than any. In its early stages it is curable. It is preventable.

The application of these facts to the organization of a system of administrative control of the disease has not been widely made, and it is only within very recent years that an intelligent, comprehensive, sanitary surveillance on the part of the state or municipality has been inaugurated.

Our object in the present day crusade is the eradication of the disease, and experience, as well as the facts dependent upon Koch's discovery of the tubercle bacillus, and his demonstration of its communicability and preventable nature, have shown that our only hope lies in the adoption of adequate prophylactic measures.

Kayserling has expressed Koch's principles of a campaign against any infectious disease in the following law :

1. The foundation of the crusade inaugurated by Koch lies in the knowledge of the biological characteristics of the specific cause of the disease. The aim of the crusade is the protection of the well from infection by destruction of the specific infectious material.

2. This crusade of Koch can be employed against any infectious disease in which (1) we are able to make an early and certain diagnosis, and (2) in which it is possible to render the infectious material innocuous.

3. The point of attack is the infected individual.

4. The method consists (1) in systematically searching out the infected with the aid of bacteriologic examinations, and (2) in rendering the infectious material, found within or outside the body, harmless.

But, as Koch has said in his address before the International Congress on Tuberculosis, held in London in 1901, "No general detailed scheme is possible for the treatment of every pestilence. Each must be treated according to its general characteristics, that is, its cause and particular mode of infection." Tuberculosis differs in many respects from the other contagious diseases, and presents an entirely new problem, making necessary the employment of new methods for its control. These differences are as follows :

1. Tuberculosis is a disease usually chronic in nature, existing for months, years, or even a lifetime.

2. In tuberculosis the dangers of contagion are less evident.

3. The sources of contagion are frequently uncertain or impossible to determine.

4. There is continued danger of contagion during the entire life of the infected individual if the disease remains active, thereby necessitating continual surveillance for months or years.

5. It often shows a long latent period.

6. There is usually an entire absence of characteristic acute symptoms.

7. Tuberculosis has a more direct dependence upon poverty, previous diseases, debility, etc.

8. Tuberculosis does not necessarily completely incapacitate the individual affected.

From these facts it is evident that this is the most difficult of all so-called "contagious" or communicable diseases to eradicate, and requires far more comprehensive sanitary procedures. We must treat the early case to prevent it from becoming advanced and relatively more dangerous, and to protect the well by caring for the advanced case in such a manner as to make it innocuous.

It seems incredible that, with the above facts regarding the disease so clearly shown by the discovery of the tubercle bacillus, and the methods of combating it so emphatically laid down by Koch twenty-five years ago, the world should have been so slow in adopting adequate measures for its control. The great sanatorium movement, to which unfortunately so many have blindly looked for the solution of the problem, has failed utterly in stamping out the disease. The results in curing the incipient are indeed most gratifying, but by this means only a small percentage of a class which, according to reliable statistics, represents only ten to fifteen per cent. of all cases of pulmonary tuberculosis, and the least important from the point of view of danger to the community, is cared for. Sanatorium treatment does not touch the root of the evil, namely, the chronic case, or infectious focus. In curing the early case, it must be admitted that a few are thus prevented from becoming advanced, and therefore centres of dissemination, but the number is too small to be considered of great importance in our plans to annihilate the disease. If it were possible to recognize every case in the early stage and to thoroughly treat it, the number of advanced cases would be small, but unfortunately the

greater number are not recognized until they have passed to the advanced stage. The keynote of our crusade is "*Prevention.*"

A careful consideration of these facts inevitably leads us to the conclusion that the combat against this scourge can be effectively carried out only by each community facing its own problem through preventative means. Even the state is powerless to assume such responsibility. A small percentage of those most dangerous to the community may be segregated in the state hospitals for the advanced, but so great is the total number of all stages that only an insignificant proportion can thus be controlled.

In the accompanying scheme, I have attempted to enumerate in tabular form the factors essential to a municipal crusade against tuberculosis.

#### GENERAL SCHEME OF ORGANIZATION OF A MUNICIPAL CAMPAIGN AGAINST TUBERCULOSIS.

##### I.—*Factors Directly Under Control of the Health Authorities.*

1. Compulsory notification and registration of all cases of tuberculosis.
2. Medical inspection of the home conditions of all cases reported.
3. Obligatory free disinfection after removal or death of a consumptive.
4. The maintenance of a laboratory for free bacteriologic examinations.
5. Enforcement of laws against promiscuous spitting in public places.

##### II.—*Institutions for the Care of the Tuberculous.*

1. Hospitals for the very advanced ("dying") cases.
2. Sanatoria for those in the incipient stages.
3. Dispensaries.

4. Provisions for the great class of middle-stage consumptives, *i.e.*, sanatoria camps, cottage hospitals, etc.
5. Convalescent homes or colonies for those discharged from the sanatoria.
6. Special institutions for children, *i.e.*, sanatoria camps, hospitals, out-of-door schools, etc.

### III.—*General Provisions.*

1. The formation of comprehensive plans of organization to the end that all efforts directed against tuberculosis, whether public or private, shall be properly co-ordinated.
2. The adoption of measures for the improvement of workshops and the dwellings of the poor.
3. Efforts directed to the dissemination among the people of knowledge concerning the nature and means of prevention of the disease.
4. Provisions for relief among the tuberculous poor.
5. Special provision for scientific work and the investigation of the conditions existing in the community.

### FACTORS DIRECTLY UNDER THE CONTROL OF THE HEALTH AUTHORITIES.

1. *Compulsory notification and registration of all cases of tuberculosis.*—The importance of these requirements is self-evident, as all measures for prevention must depend on an accurate knowledge of the number of infected individuals and the distribution of the disease. We know that tuberculosis is a house disease, and that cases are frequently found in “nests,” and it is in the bringing these infected localities to light that registration is of the greatest value. The medical examination of the entire family of the consumptive often results in the discovery of several other infected members

previously unsuspected. The objections so often raised in the past to such regulations on the part of the municipality have largely disappeared by reason of the success attained by many cities in Great Britain, Norway and the United States. That judicious pressure on the physicians by the authorities can bring about satisfactory results is well shown in New York City, where Dr. H. M. Biggs estimates that at least 85 per cent. of all cases are reported. Such information furnished the Board of Health is confidential and works no injustice or hardship to the individual. Compulsory notification does not in any way imply that the person reported is removed to a special hospital, or even visited by a health officer. In private cases no special measures should be taken unless requested by the attending physician, if it is clear that action is unnecessary.

Dr. Biggs has called attention to the educational influence of compulsory notification, in the emphasis which it places on the contagious nature of the disease.

2. *Medical inspection and visitation in the home.* — Immediately after notification, unless under the care of a private physician, the patient should be visited, either by a nurse especially trained to observe and judge of the hygienic conditions, by a medical inspector who is an agent of the health department, or both. In many instances, visitation by the inspector is superfluous, unless requested by the nurse in charge. The method of disposal of the consumptive is to be determined not alone by the stage of the disease, but by the social and home conditions as well. On the one hand, the moderately advanced case, who is careless, ignorant or vicious in his habits, may be more suitable for institutional care than the far advanced, who by reason of his intelligence and care in the disposal of his sputum safeguards those about him. Poverty, dissipation, unhygienic environment, carelessness and many other factors may be as important or more so in determining the disposition of the consumptive as the stage of the disease. An expert report of all these must be at

hand before recommendation can be intelligently made regarding the treatment.

All members of the household should be thoroughly examined for the possibility of tuberculosis, either by the physician who visits them in the home or at some tuberculosis clinic. Especially in the families of the very poor, one case brought to light almost invariably means one or several other members similarly affected, but usually unsuspected. In no other way than by systematic examination of all individuals thus exposed to infection is it possible to find, even approximately, all cases of consumption. It should further be within the power of the health authorities to forcibly remove any consumptive who may be considered a source of danger to the public health.

3. *Disinfection.*—It should be an inflexible rule that after death or removal of the consumptive the room or entire dwelling, if necessary, must be disinfected, and all movable furnishings, such as carpets, mattresses, draperies, heavy bedding, etc., be removed and disinfected by steam at some central station of the Board of Health. Under more unfavorable conditions still, complete renovation on the part of the owner should be required. In extreme cases, where tuberculosis has developed among successive tenants, in spite of renovation and disinfection, as frequently happens in houses in the slum districts, public safety requires that the building should be absolutely condemned. As an extra safeguard, notification to the health authorities of the death or removal of the patient should be required of the owner.

In our work in Boston among the destitute, the nurses occasionally report that a part of the furnishings in the home are sold to second-hand dealers prior or subsequent to the death of the afflicted, sometimes even the bedding used by the patient. The prohibition of this until after thorough disinfection properly falls within the duties of the Board of Health.

Hardships must necessarily come to some as the result of

the enforcement of such strenuous measures, as sometimes occurs when through fear a consumptive is ejected by the landlord under pressure from other tenants, but such measures are justified by reason of the safeguard which their enforcement means to the community at large. Education of the public as to the true nature of tuberculosis and the meaning of the effective prophylactic measures will in time overcome the prejudice and fear which brings these hardships. The public will soon learn that the consumptive, when thoroughly trained in the care of his sputum and general mode of life, can render himself absolutely harmless to his surroundings.

4. *Maintenance of a laboratory for free bacteriologic examinations.* — Through the establishment of stations in various parts of the city where sputum bottles may be obtained and the specimens left to be collected, the laboratory can be made easily accessible to the general practitioner who for various reasons may not be able to make the examinations himself. In New York a laboratory of this nature was established by the Board of Health in 1894, and in Boston in 1900. The experience of these and other cities has demonstrated the advantages to be gained from such facilities afforded private physicians. One of the most valuable results of the bacteriologic examination of sputa in the city laboratory is the information which is thus brought to the Health Department of positive cases, which might otherwise fail to be reported.

5. *Laws against promiscuous spitting.* — Every community should have ordinances similar to those in Massachusetts and many other states and cities, prohibiting spitting in public conveyances and places, carrying with it a penalty for violation. The moral influence of such laws prohibiting careless spitting must be considerable. Through the placing of cuspidors in the corridors of public buildings, the posting of signs in street cars and other conspicuous places calling attention to the ordinance and the penalty for violation, much can be accomplished in lessening this evil.

## INSTITUTIONS FOR THE CARE OF THE TUBERCULOUS.

1. *Hospitals for the very advanced or dying.* — Roughly speaking, the dangers to the community increase in direct proportion to the advance of the disease process in the individual. In the last stages, when the sputum is abundant, and so frequently the patient, owing to his weak condition, is utterly careless and indifferent in his habits, proper precautions against infection usually can be carried out only in a hospital. Furthermore, with the advance of the disease and consequent loss of ability to work, comes poverty and all its accompanying conditions favorable to the spread of the disease. Among the very poor no measures carried out in the home can be certainly effective in preventing the propagation of the disease; neither can the patient receive proper care in his own home.

Provision should be made for the permanent detention of such patients as may be forcibly removed from their homes by the health authorities. It must always be kept in mind that we have constantly to deal with a considerable class of consumptives who are "homeless, friendless, dependent, dissipated and vicious," and these are apt to be of the most advanced type. If not segregated in such an institution, they wander about sowing the disease broadcast. "If the hospital is to fulfil its mission, from the sanitary and economic standpoint, patients once admitted must not be discharged save for quite exceptional reasons. To make the patient a little better and then discharge him from further treatment is almost completely to negative the purposes for which the hospital was instituted."—*Philip*.

In order to insure proper care and the enforcement of effective prophylactic measures, the cost of maintenance is unavoidably large. The type of construction should be determined with reference to the comfort of the patient, and to facilitate the proper disposal of his sputum, care of linen, etc., so that the dangers of infection may be rendered

*nil.* Its exact location is of little importance, except that it shall be readily accessible to friends and the visiting staff.

2. *Sanatoria for early cases.*—In the organization of a municipal crusade against this disease, we must not permit the importance of preventative measures to completely obscure the necessity for treatment of favorable cases offering hope of cure. To this end, every city should provide sanatorium care for its incipient cases, either by erecting and maintaining one of its own, or through co-operation with the state. Sanatoria should be in closest touch through the dispensary with all other institutions included in the above plan, in order that suitable cases may be admitted, and that all those discharged, whether apparently cured, arrested or not improved, may be subsequently under strict surveillance. It is desirable that the sanatorium be located near the city.

In spite of the encouraging results which have in recent years been obtained by home treatment, even among the door, the sanatorium still offers as definitely as ever the best hope of cure. Here the possibilities for the maximum of fresh air and sunshine, for good food, and, most important of all, constant medical supervision, are far better than any which the homes of the poor can offer.

Experiments on a colossal scale carried out by the workmen's insurance societies in Germany have proved that, even at the enormous expense necessary, it pays to cure the consumptive in the early stages. If the insurance companies, from a purely business point of view, have found that it costs less to treat the early case than to pay sick benefits later, it must surely follow that it will pay the community at large to prevent infection, which can largely be brought about by caring for the advanced consumptive, the chief source of infection. We therefore have not only humanitarian but definite economic reasons also for this work. From the side of prevention, also, there are considerations in favor of sanatorium treatment, since in curing the early cases

we prevent them from becoming advanced, and, consequently, dangerous from the point of view of infection.

3. *The tuberculosis dispensary.* — In so complicated an organization as that necessary for a municipal crusade against tuberculosis, which brings into co-operation many isolated institutions and independent factors, a definite centre is obviously the first requisite. That the tuberculosis dispensary can best serve as this “uniting point” was long ago emphasized by Dr. Philip of Edinburgh, and the correctness of this conception has since been abundantly shown. All activities in the movement should be focussed in the dispensary, which should in turn serve as the distributing centre also. One writer has well termed it the “clearing-house” for tuberculosis. All cases, regardless of the stage of the disease or particular circumstances, should first be thoroughly investigated and recorded at the dispensary.

The first, and in many instances the most difficult, part of the work with the tuberculous is the making of a definite early diagnosis. Both expediency and necessity make it imperative that the disposal and treatment of the patient should be various, depending on the stage of the disease, and on the social and financial conditions. Furthermore, it is of the utmost importance that, in dealing with a chronic, infectious and communicable disease like tuberculosis, a record of all cases should be permanently kept in some central bureau. The tuberculous poor frequently move from house to house, often leaving in their old abode conditions favorable to infection of the next occupant, and to insure public safety their whereabouts must be constantly recorded, in order that disinfection and renovation may be systematically done after removal. Many are also lost sight of after discharge from sanatoria, or hospitals, just as frequently when the disease has been arrested or cured as when no improvement has resulted. The supervision of the case by institutions, whether sanatoria or hospitals for chronic cases, is in most instances only temporary.

So great is the number of consumptives in any large community that but a small percentage can ever be cared for in institutions, and it is inevitable that by far the greater number must be allowed to remain in their homes. For example, it is not probable that for many years, if indeed ever, we can reasonably expect to provide for more than a total of a thousand beds for phthisical patients in Boston, and yet the total number within the city undoubtedly exceeds 10,000. Were these beds sufficient to accommodate all, many would, for one reason or another, find it impossible to leave their family for a prolonged stay in the hospital. The great majority of consumptives are not known and cannot be discovered except by systematic aggressive work, *i.e.*, by regular examination of all members of the families of the known tuberculous, searching out all cases reported to the Board of Health, medical investigations in the infected districts of the city, and in other ways.

It will thus be seen that the functions of a dispensary may be roughly grouped under seven heads.

*A.* To serve as the centre of the general organization.

*B.* By the aid of every available means at its disposal to make a definite early diagnosis.

*C.* To investigate the social and financial condition of the patient.

*D.* After such investigation, to determine the disposal of the case; that is, whether it be suitable for the sanatoria, sanatoria camps, hospitals for advanced cases, or for home treatment.

*E.* To keep a permanent record of the residence and condition of the patient, wherever he may be.

*F.* To assume the care of those patients who are to be treated in their homes.

*G.* To carry on aggressive work in searching out the infected.

*Location and arrangement.* — The location should be as accessible as possible to the poorer districts of the city. A

detailed description of the arrangements of rooms and furnishings need not concern us here; suffice it to say that the equipment should comprise ample examining and dressing rooms, a laryngological room, an X-ray room, a medical dispensary and a laboratory.

*Organization.* — The organization of such a special clinic differs somewhat from the more general out-patient clinic connected with a general hospital. But a single class of cases, *i.e.*, tuberculous patients, are to be treated, a class requiring greater study as to the exact nature and extent of the disease, the social and financial conditions, and vastly greater supervision and relief in the home when treated there.

The entire work of the clinic should be under the control of a director, to whom all assistants and nurses employed in the work are directly or indirectly responsible. To him all questions of general policy and the final disposition of cases should be referred.

A well equipped laryngological department under the direction of an assistant is a necessity, since all cases should have a careful examination of the nose and throat, and many require special treatment. If the most precise work in diagnosis is to be done, an X-ray plant is an indispensable part of the equipment.

As above emphasized, by far the greater part of the work is to be done in the homes of the patients. If the invalid is to be treated at home, the problem is one requiring knowledge, experience, time, and tact on the part of the representative from the clinic having it in charge. Experience has shown that this can best be done by a corps of nurses; they may be graduates in nursing, and should have had experience in social work. The difficulties in obtaining data of the financial and social condition and the dangers of misapplied relief are so great that only the most efficient can succeed. At least some of the visitors in the home must possess a speaking knowledge of Yiddish and Italian, for a consider-

able portion of cases treated are Russian Jews and Italians. Fortunately, these nationalities are often segregated in definite sections of the city, and such a section can be assigned to a nurse who speaks the language. As a rule, especially in the large municipalities, the best results are accomplished when each nurse is assigned a definite section of the city, for in this way the people and their home conditions can be better studied than when the visitations are made by several. All the work of the nurse is done under the direction of the head nurse, who in turn is responsible to the director of the clinic. Frequent conferences with the nurses regarding the cases and methods to be employed are obviously necessary.

One of the main roots of tuberculosis is poverty, and the most difficult problem in the work of the dispensary is that of relief. To a limited extent this can be furnished by the dispensary directly through its appropriation for maintenance, but by far the greater part must come through various other channels, as charity organizations, societies, employers and individuals. We cannot prescribe a diet rich in milk, eggs, beef, etc., for a patient who is unable to buy bread, neither can we insist upon his sleeping out of doors or even with his windows open when he has no warm bed clothes. Until we furnish support for the family, it is impossible for the poor bread-winner to give up work to take a rest cure.

The visitor from the clinic should be essentially a social worker, sufficiently trained to determine the needs of a family and its worthiness to receive relief, but the actual securing of this relief requires more time than can reasonably be demanded of her. Here her work may properly stop, and be taken up by a committee or bureau of relief, which shall be a link between the needs of the destitute on the one hand as determined by the nurse, and the source of funds on the other. The exact organization of this bureau will depend somewhat on the magnitude of the work undertaken and the conditions under which its activities are to go on. In general, the mem-

bers may be either paid or volunteer workers, but I am strongly inclined to the opinion that, if volunteers, their work should be supervised by a salaried head.

Whether the dispensary shall be under the control of the Board of Health, as in New York, or of a commission or separate board of trustees, as in Boston, is immaterial. Its functions are the same in either case.

One serious consideration is the time when a clinic should be open for patients. This will be dependent in the main on the number of cases to be cared for. In all large centres, at least one or two evening clinics a week is advisable, for many who are working find it impossible to come for examination during the day.

The choice of a name by which the clinic is to be known is of some importance. I have frequently observed that patients will not go, or will go only after persuasion, to the "Consumptives' Hospital, Out-Patient Department," for examination. The admirable choice of the name "Municipal Dispensary for Communicable Diseases of the Chest" by the New York authorities obviates the difficulties above suggested.

I have spoken thus far only of the strictly municipal dispensary. The same type of institution may be equally well maintained, as is often the case, as a separate clinic of an out-patient department, or by private individuals or societies. The needs and methods to be employed are the same in all. If several exist in one large centre, as is the case in New York (eight) and Boston (five), the closest co-operation should be maintained, in order to avoid duplication of effort and to insure the most effective results.

4. *Institutions for moderately advanced cases.* — The greatest difficulties are connected with the care of the great mass of moderately advanced cases, who are neither suitable for the sanatorium nor for the hospital for the dying. The previous hopeless, indifferent attitude toward all cases beyond the incipient stage has slowly given way to a more and more hopeful one, and we have come to realize that in a few even

a cure or an arrest of the disease may be effected, and that in a considerable proportion we may restore the patient to at least partial working capacity. We can certainly train many and supervise all so that they may not be dangerous *foci* of infection.

This larger group may be divided into several classes :

1. For those who have homes where they can remain at night, the sanatorium day camp affords inexpensive and effective means of treatment, admirably suited to their needs. The patients sleep at home, but are required to report daily at the camp, where they are under the closest supervision until their return in the late afternoon. The routine differs but little from that in the sanatoria, and consists essentially of a life in the open air throughout the entire day, with an abundance of nourishing food. Strict discipline is a first necessity, since the patient is under the control of the physician and nurse but one half of the twenty-four hours. Our experience has shown the advisability of having the physician in constant attendance, and also a nursing staff, one member of which shall devote her entire time to visiting in the homes and to the following up of delinquents. The experiment, now under way in Boston of continuing the work of the camp during the winter months is proving beyond a doubt the advisability of maintaining it throughout the entire year. In northern climates, however, a permanent, heated building should replace the usual tents. The one described and pictured elsewhere in this report seems to fulfil all requirements and can be built for a relatively small sum.

The members of the camp coming from among the very poor have an unusual opportunity for missionary work among their fellows, and the great amount of time which they spend each day under close supervision renders it possible to instruct them personally as to the proper methods of fighting the disease.

Both the camp and the cottage hospital system (to be described below) can be administered most effectively and

economically if immediately adjacent to or actually a part of the hospital for far advanced cases, as in the case of this hospital. With uniform records and methods of treatment, the frequent shifting of cases from one to another, according to the improvement or advance of the disease, is rendered most simple.

2. Many of the advanced ambulatory cases have no homes, or only such as are entirely unsuited to their needs at night, and for these some form of hospital intermediate between the camp and hospital for the dying is required. I am convinced that a type of building like the improved "lean-to's" at the Loomis Sanatorium, Liberty, New York, but more permanent in construction, and with ample heating facilities, best fulfils all requirements. It is really a permanent camp, plus facilities for caring for the patients at night. The plan is simple and the structure rough. A central portion comprises a large assembly room, sanitary arrangements, locker rooms, a nurses' room and a small emergency ward. On each side of this central portion is a wing facing the south, containing two rows of beds. In the cottage now being constructed at Mattapan, each ward contains twenty beds. Along the entire southern side of the ward is a piazza on the same level with the floor, and by means of sliding glass doors the two can be made continuous. As all cases are ambulatory, the patients remain out of doors or on the veranda during the day, as in the camp. In the case of both institutions, arrangements should be made for the careful administration of graduated work for patients.

3. A miscellaneous group of cases, even larger than the first and second combined, for various reasons, are unable to place themselves under treatment in either of the above described institutions, and must be supervised in their homes by the dispensary.

5. *Institutions for those discharged from the sanatoria.* — One of the most disappointing facts regarding the sanatorium treatment is the relapse of the disease, which so frequently

occurs after discharge, in cases where it was apparently cured or arrested. The reasons for this are doubtless many, but three are probably most important: 1. The length of stay in the sanatorium is usually entirely inadequate to effect a permanent cure. The symptoms are relieved, the patient gains in weight, and perhaps the signs in the chest disappear, but the cure is not complete. 2. With few exceptions, the sanatorium regime makes little or no provision for building up the resistance of the patient by graduated work. The patient undergoes a rest cure which often results in an arrest of the disease — he gets fat, but his resistance is not sufficiently improved to permit him to return to work. In other words, the change from a rest cure to his regular work is too abrupt. 3. After discharge from the sanatorium care, the consumptive too often returns to the unhygienic home conditions, and with the assurance of a “cure” or “arrested process,” and under the necessity of earning support for his family, resumes his former work without supervision. From ideal surroundings of the sanatorium life and constant medical care, he suddenly returns to the identical conditions under which he acquired his infection, with only his sanatorium habits to safeguard him.

The first two difficulties can be obviated only by a radical reform in the regime adopted in most sanatoria, the third by the establishment of convalescent colonies or homes, if possible in the immediate vicinity of the municipality, where those leaving the sanatoria may go for a considerable stay for final preparation for active work. By a system of graduated labor, preferably in the open air, and carefully adapted to his strength, the convalescent can be gradually developed to a fit condition to take up some regular occupation. Much can also be done in teaching certain trades or occupations which offer the least objectionable conditions for the consumptive.

6. *Special institutions for children.* — Careful studies during the past few years have demonstrated a far greater prevalence of tuberculosis among children than was previ-

ously recognized. It can readily be understood that the habits of children are extraordinarily favorable for infection with the tubercle bacillus, especially during the early years. Very commonly remaining latent, the disease is not recognized until in later years, when under some special strain, as the stress of school work, it becomes active. The difficulties in making a definite diagnosis in children are well known. It is often impossible to distinguish between tuberculosis and severe debility resulting from poor nutrition and the influences of unhygienic conditions of life. In large centres where a convalescent home is maintained for children, many of the incipient or doubtful cases can be provided for in special wards or shacks, or in sanatoria camps similar to the one described above. Sanatoria are best suited for the treatment of early cases, as shown by the striking results obtained in the large European sanatoria for children. Special wards of the hospital for the far advanced can be adapted to the care of the same stage in children, or, if the number be great, a separate hospital may be desirable. When any considerable number are to be taken from the schools, because of actual or suspected tuberculosis, it is the duty of the community to provide an open-air school, where a few hours of daily instruction can be combined with careful treatment. These have proved most successful in Germany.

#### GENERAL PROVISIONS.

1. *An effective anti-tuberculosis campaign requires the formation of comprehensive plans of organization to the end that all efforts directed against tuberculosis, whether public or private, shall be properly co-ordinated.* — It was pointed out at the beginning of this discussion that the problem was too vast, and the financial responsibilities too great, to be undertaken entirely by individuals or even charitable associations. An eminent English writer has well expressed this principle in the following words: "Local efforts on a microscopic scale

are here and there started by benevolent people, but they must serve as the mere nuclei of example and encouragement for larger efforts undertaken by municipal authorities throughout the kingdom, before they can effect any notable improvement in the prevalence of the death-rate from consumption." The care of the tuberculous poor and the protection of the well from infection through sanitary regulations reasonably come within the duties of the health authorities, yet the greatest assistance can be rendered by various private agencies, as in the administration of relief among the poor, the education of the people, and in many other ways. As the needs are many and varied, so the measures to be adopted for the eradication of the disease must be various, and many of these can best be carried out by private enterprises. By proper co-ordination these can be made to supplement each other, duplication of effort can be avoided, and each aided to enter the field of service where its efforts are most needed, or can be most effectively applied. A most inspiring practical demonstration of such organized efforts has been furnished by the cities of New York and Edinburgh.

2. *The adoption of measures for the improvement of workshops and the dwellings of the poor.* — Two facts regarding tuberculosis cannot be too often reiterated, namely, that it is a disease of the masses, and that infection usually takes place in the house or workshop. Investigations have repeatedly shown that the mortality from consumption in a given city is usually greatest in the poorest and most densely populated districts. The explanation is evident, as here along with a lessening of resistance on the part of the well, as a result of the unhygienic conditions, goes an increasing possibility of infection, due to the overcrowding which brings the sick and well in closer contact. Furthermore, the conditions in the dwellings of the very poor favor the continued vitality of the infecting organism. In other words, poverty stands in direct causal relationship to tuberculosis. The enormous scale on which relief has been attempted in Germany for these condi-

tions may well serve as a model for other countries. The Workingmen's Insurance alone has, during the past eight years, loaned more than 40,000,000 marks for the building of model houses, and the state loans for the same purpose are of nearly equal magnitude.

3. *Efforts directed to the dissemination among the people of knowledge concerning the nature and measures for the prevention of tuberculosis.*—The most vigorous sanitary surveillance on the part of the municipal health office, together with the efforts of all agencies engaged in the struggle, cannot avail without the co-operation of an educated public alive to the seriousness of the problem and the best methods of its solution. The first effect of agitation of the question is too often hysterical fear, which results in no effectual action, but only injustice and hardship to the unfortunate consumptive. We must teach the public that the consumptive must not necessarily be separated from his fellows, if he takes the proper precautions to destroy or disinfect his sputum. Real knowledge of the prevalence, nature and course of the disease, the best methods of combating it through treatment and prophylaxis, and the results which can surely be achieved, will bring about the intelligent action necessary. It is in this direction that anti-tuberculosis societies and similar agencies can render the greatest aid to the authorities. The methods are many, *i.e.*, public lectures and stereopticon demonstrations, the distribution of leaflets, travelling exhibits and permanent museums, newspaper articles, and placards in public places. The public schools, also, through systematic instruction, afford an excellent means of reaching the public. Of more direct and practical importance still is the personal instruction and supervision by the visiting nurse in the homes. All familiar with the work of the dispensary can bear witness to the revolution which so often takes place in the habits of those living in the immediate vicinity of the families visited by the nurse.

4. *Provision for relief among tuberculous poor.* — This has been fully discussed above.

5. *Special provisions for scientific work and investigations.* — Every complete anti-tuberculosis organization must include ample provision for research, and the municipality may as reasonably furnish funds for this as for the care of patients. The entire conception of the modern crusade is directly based upon the discoveries of science. Many problems regarding the transmission of the disease, as well as its course and treatment, are still unsolved, and the study of these should go hand in hand with the practical work of relief and control.

Similarly the distribution of cases, their number and the associated conditions in the homes of the afflicted, can be ascertained only by medical investigation requiring great labor and the expenditure of considerable sums of money. Until some accurate record is made of the character and magnitude of the scourge, no intelligent comprehensive campaign can be inaugurated. Exhaustive studies along these lines are necessary at the very beginning of the program of work of the municipal authorities.

#### THE PROBLEM IN BOSTON.

The Boston Board of Health records show that, for the year 1906, 1,185 deaths resulted from consumption, 1,358 from all forms of tuberculosis. Among the large cities in the United States Boston stands third, New Orleans and San Francisco alone having a higher death rate from consumption.

Chart I. represents the annual death rate per 10,000 inhabitants from consumption in Boston from 1846 to 1906. As is well known, in the twenty years since 1886 the death rate has rapidly dropped from 40.8, in that year, to 19.6 per 10,000 inhabitants in 1906, a diminution of more than 50 per cent. It is unnecessary to discuss here all the factors which have led to this rapid decline. Undoubtedly, the chief

No of deaths from  
consumption per  
10,000 inhabitants



CHART I.—SHOWING DEATH-RATE FROM PULMONARY TUBERCULOSIS IN BOSTON FROM 1846 TO 1906.



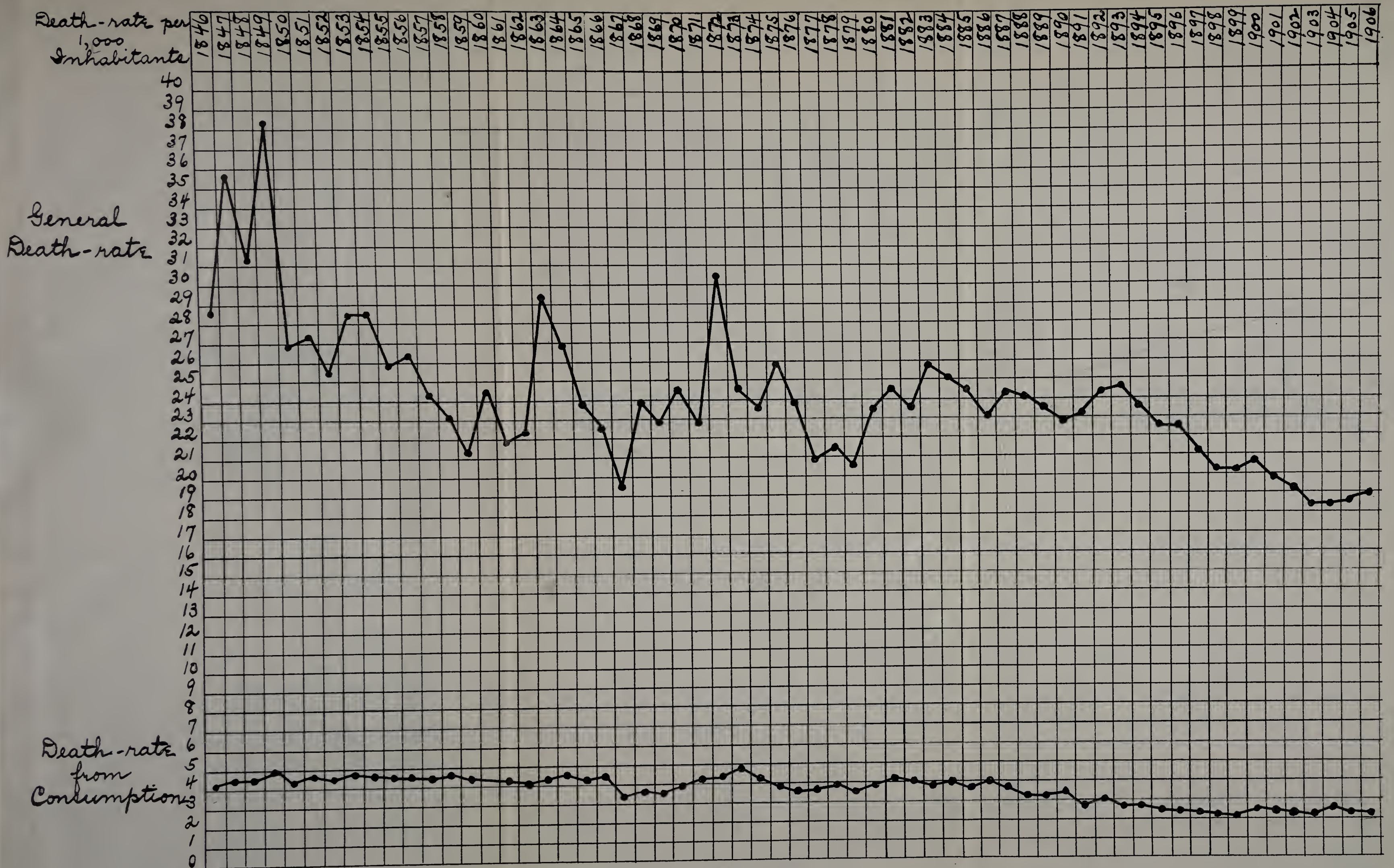
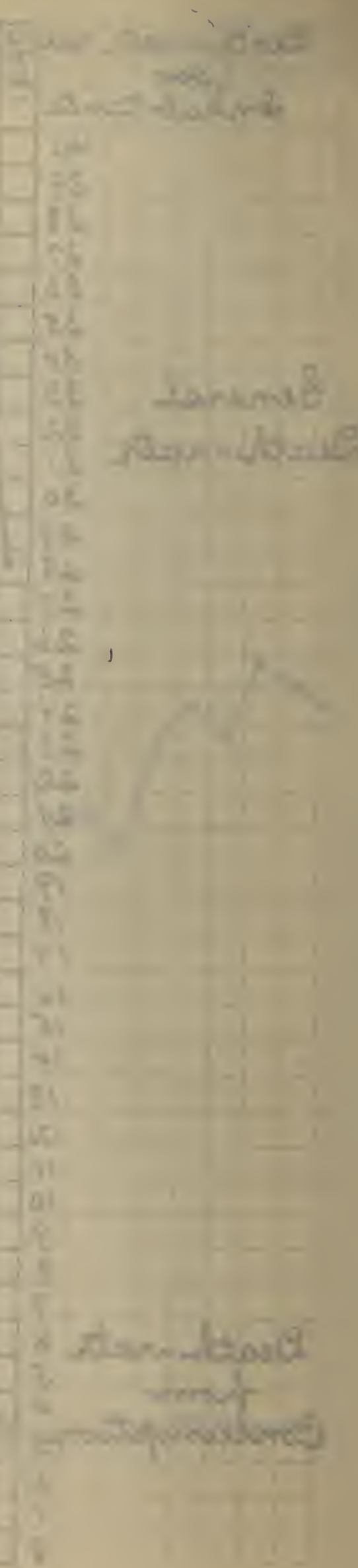


Chart II.  
Showing relation of death-rate from consumption to general death-rate in Boston from 1846 to 1906.



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among them are the Board of Health activities and the wider dissemination of knowledge concerning the true nature of the disease, especially its communicability, with the resulting increase in caution in avoiding exposure to contagion. The actual number of lives saved by this reduction in death rate from consumption since 1886 is 14,412. If such extraordinary results have been reached in this way, it is not unreasonable to expect that the measures now being put in force can bring about even better results within the next one or two decades.

Chart II. shows the relation of the death-rate from consumption to the general death rate from all diseases, both expressed in terms of the number per 1,000 inhabitants. During the period from 1886 to 1906, the percentage of the total death rate due to consumption fell from 14 to 10. This relatively small decrease in the percentage of the total mortality due to consumption in comparison with the much greater decrease in the actual death rate for consumption is readily explained by the fact that the total death rate during the same period fell rapidly as a consequence of the decrease in the number of deaths from other diseases, chiefly the contagious group. The fall in the general death rate during this period of twenty years was from 23.09 to 18.94 per 1,000 inhabitants.

A comparison of the number of deaths due to tuberculosis in general during the year 1906, and the other communicable diseases, is well illustrated in Chart III. While all forms of tuberculosis (chiefly consumption) caused a total of 1,358 deaths, diphtheria, typhoid fever, whooping cough, measles, scarlet fever and smallpox combined caused only 486. It is impossible to make a definite comparison of figures regarding the actual number of cases of these diseases existing in the city, because of the absence of any reliable statistics of the number of consumptives, but the ratio of the number of consumptives to the total number of the other five communicable diseases would probably be much greater than the ratio of death rates.

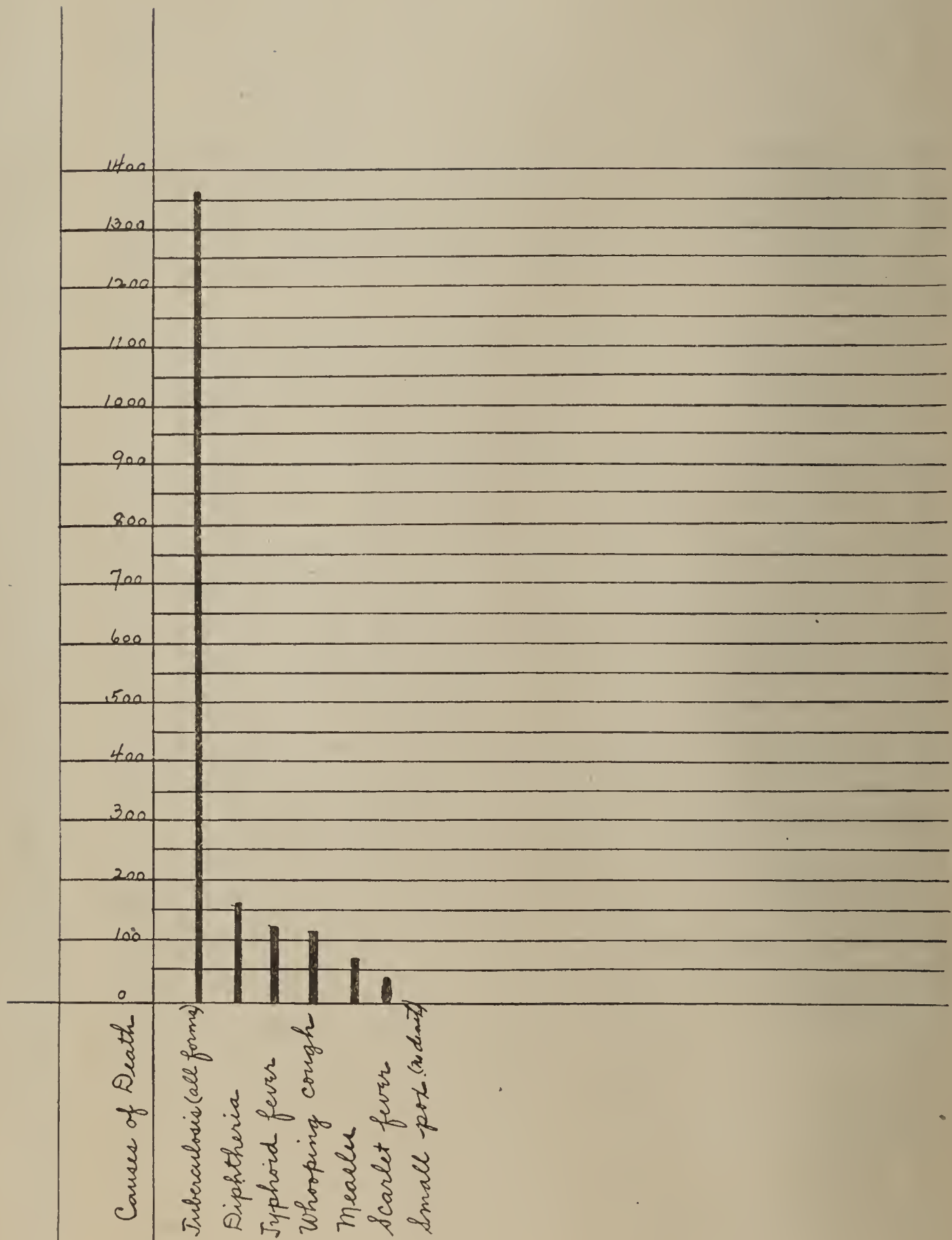
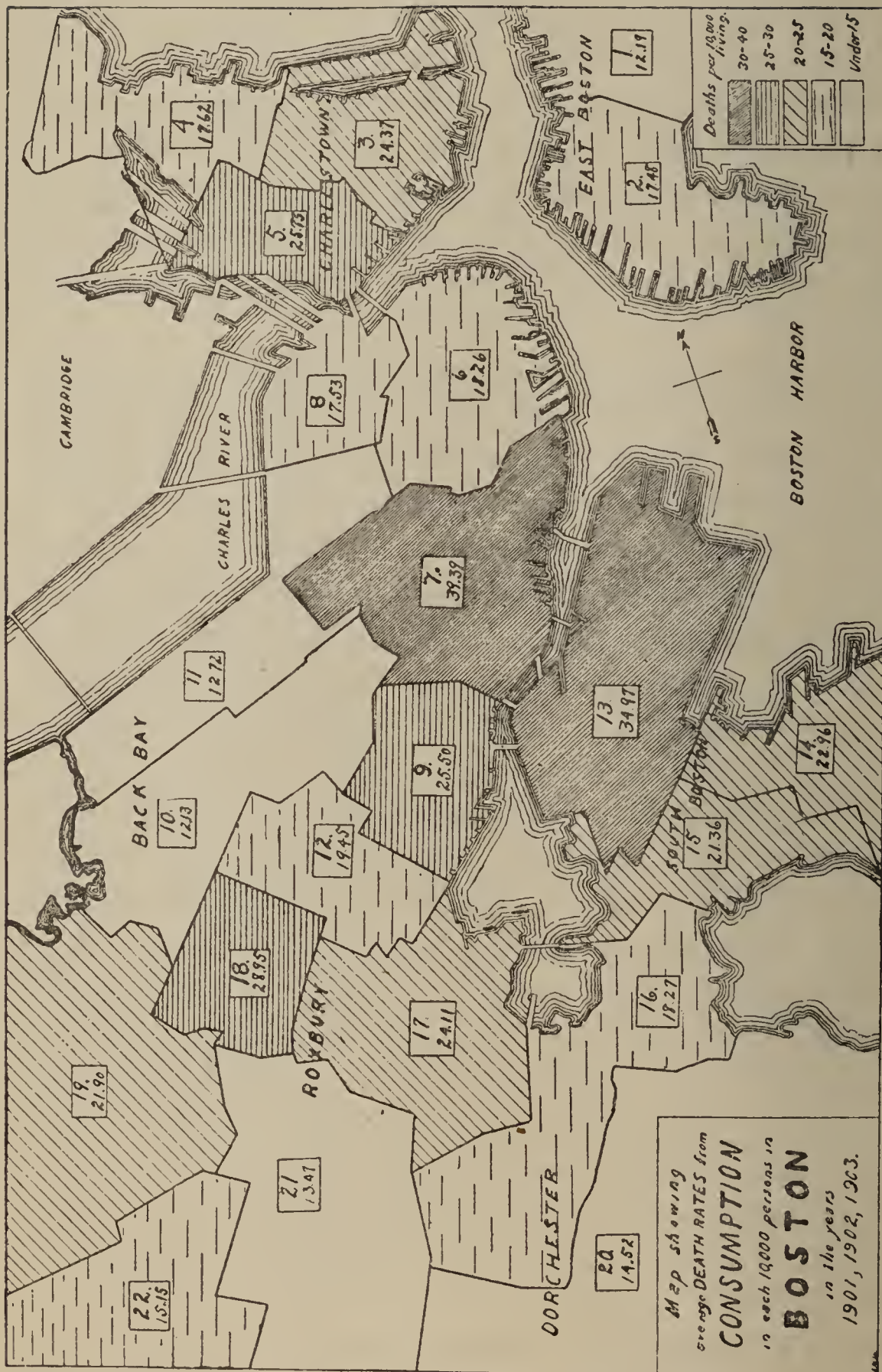


CHART III.—COMPARISON OF DEATHS IN BOSTON DURING 1906 DUE TO TUBERCULOSIS WITH THOSE DUE TO OTHER COMMUNICABLE DISEASES.

But one single cause of death (pneumonia, including the broncho-pneumonia in children) gives a higher death rate than consumption (1,331 deaths from the former to 1,185 of the latter in the year 1906). If all deaths due to every form of tuberculosis be included, then the total (1,385) is greater. Reported post-mortem studies have established the fact that in a considerable percentage of cases tuberculosis is unrecognized during life; hence it must follow that this figure does not adequately represent the number of persons dying from the disease.

Unfortunately we have no definite knowledge of the number of cases of consumption in the city. As a result of the state regulation requiring the reporting in all cities and towns of the Commonwealth of all cases of consumption to the local Board of Health, and in consequence of the considerable number of cases discovered by the health authorities through the sputum examinations made in the Board of Health laboratory, more than 3,000 are now known to the Health Department. From personal inquiry, I am convinced that but a small percentage of physicians report their cases. Furthermore, our work among the poor is constantly emphasizing the fact that a majority of cases other than the most advanced are never known, except as a result of aggressive work in systematically searching them out by medical examination. Our routine examination of all members of the family of a tuberculous individual has brought to light an astonishing number of unsuspected cases. This experience is entirely in accord with that of others (Kayserling of Berlin, Philip of Edinburgh). It is therefore a conservative estimate, it seems to me, to place the actual number of consumptives in Boston at 10,000, an estimate to which Dr. Durgin, Chairman of the Board of Health, agrees.

Chart IV. (Stone and Wilson) has a very important significance in the indication which it offers for our work. The variation in the number of deaths from consumption in the various sections of the city is striking, and seems to bear a



Prepared by Dr. A. K. Stone and Alexander M. Wilson.

CHART IV.

very direct relationship to poverty. In Ward 11 (Back Bay), for example, the death rate from consumption per 10,000 inhabitants in 1903 was only 12.72, while in Ward 7 the death rate was 39.39, or more than three times as great. In general, it is easily seen that the greatest number of consumptives are found in the more congested districts of East Boston, Charlestown, the North and West Ends, the region immediately south of Essex street, and parts of South Boston.

Chart V. is arranged to show the number of consumptives at different ages, grouped according to sex, dying in Boston during the year 1906. Various recent investigations indicate a considerable inaccuracy in the figures for the ages under 15, and we confidently expect that the systematic study now being made through the Out-Patient Department of the Boston Consumptives' Hospital will largely increase the numbers in children.<sup>1</sup> The predominance of males after the age of 30 coincides with our experience in the Out-Patient Department, where the greatest difficulty is experienced in securing accommodations for men, on account of the large numbers applying. The table further illustrates the well known fact that the greatest number of cases occur during early and middle adult life.

*Economic considerations.* — F. L. Hoffmann, actuary of the Prudential Life Insurance Company, on the basis that life after 35 is worth only \$50 per year, estimates that the loss from tuberculosis in the United States per annum is \$240,000,000.

Statistics in Illinois, 1903: The loss to the state through tuberculosis was \$36,000,000. In the same state Dr. H. W. Thomas finds that the state invests \$1,187,000 annually in raising children who die of tuberculosis under 20, and estimates the loss to the state from inability to labor from this cause as \$30,000,000.

Dr. Biggs estimates the yearly loss to New York City

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<sup>1</sup>In this report the terms Out-Patient Department and Dispensary are used interchangeably.

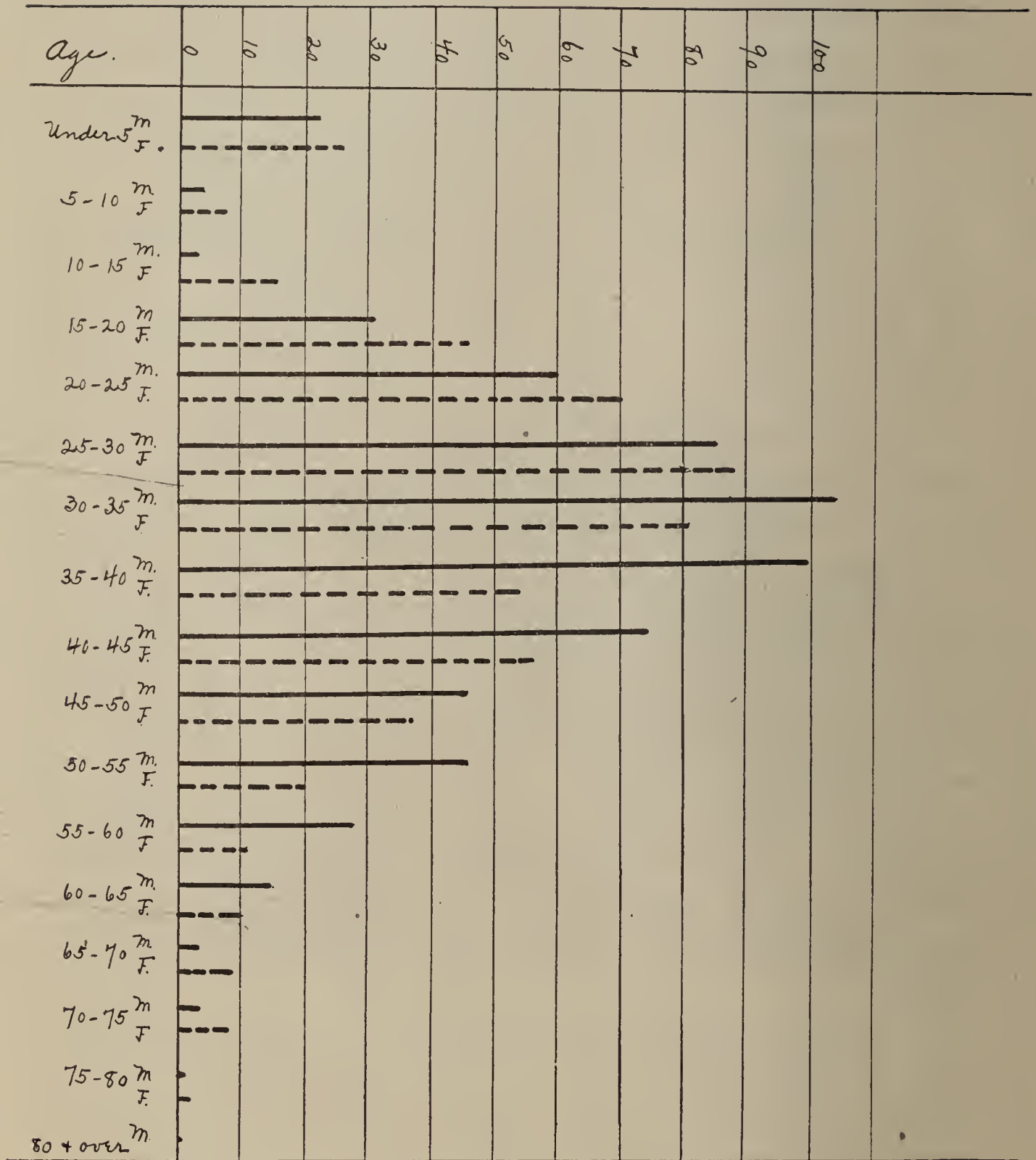
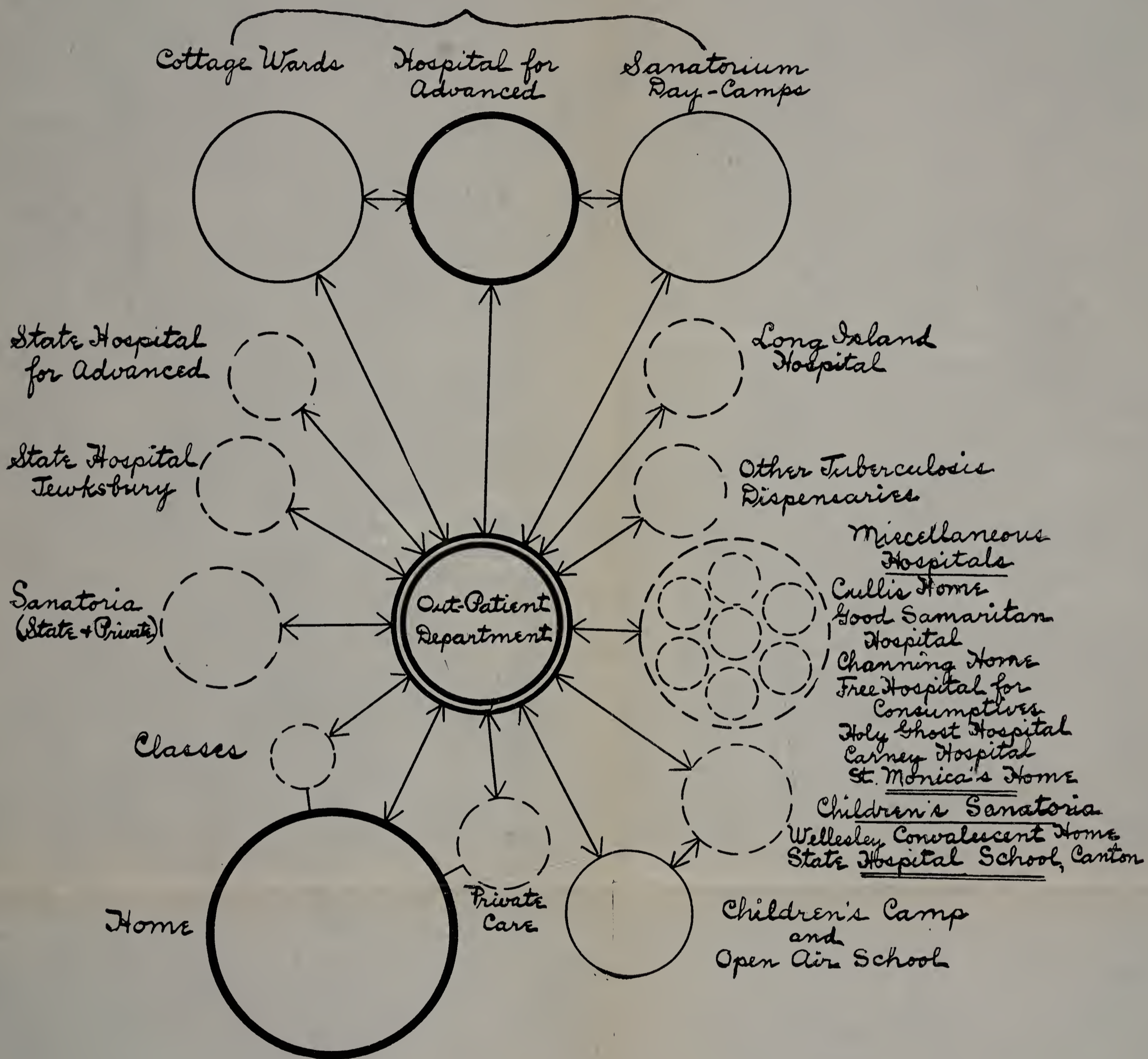


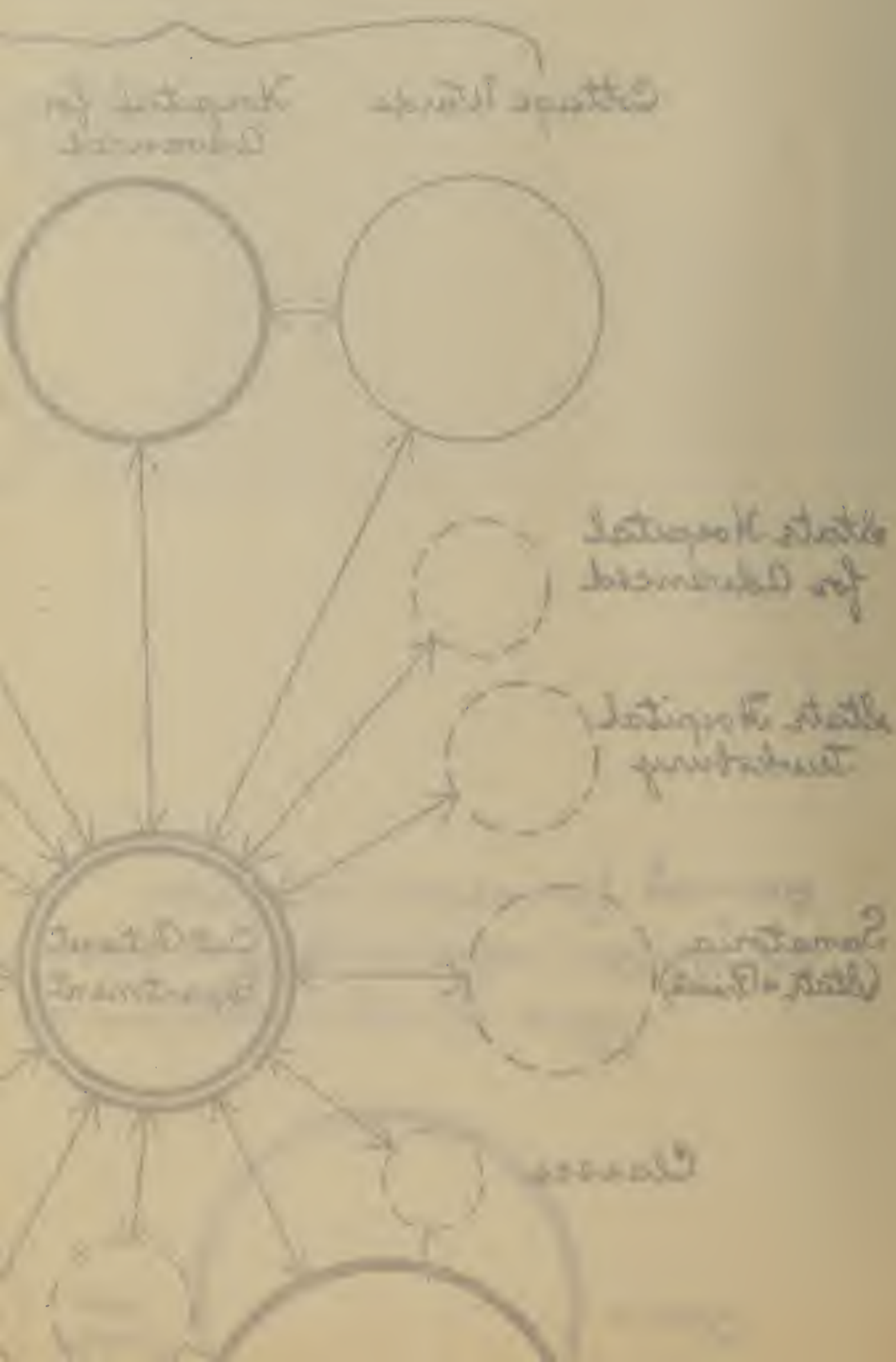
CHART V.—DEATHS FROM CONSUMPTION IN 1906, ARRANGED  
ACCORDING TO SEX AND AGE.

# Boston Consumptives' Hospital at Mattapan



Plan of organization of the municipal campaign in Boston, showing the relation of various institutions caring for consumptives.

Doctor's Curriculum  
at Washington



from deaths caused by tuberculosis as \$15,000,000, on the basis that the average life is worth \$1,500 at the time of death from tuberculosis; further, that ~~the~~ yearly loss to the United States is \$330,000,000. Yet New York City spends only about \$500,000 yearly in fighting the disease.

The English National Association finds that one-eleventh of all pauperism in Great Britain and Ireland is due to tuberculosis, and costs \$50,500,000 yearly.

The yearly loss to Germany from consumption is 86,000,000 marks. — *Kayserling*.

Marshall H. Price of the Maryland Commission figures the individual loss, in the case of the working man, as \$741.64, and the average potential loss to the community from death of the wage-earning man from tuberculosis as \$8,512.52. On this basis, his estimate of the loss to the State of Maryland is \$10,000,000 annually.

The German Working Men's Insurance has proved by the most careful investigations that, purely from an economic point of view, it pays to spend the large sums necessary to treat consumptives.

Studies similar to the above have never been made in this community, but it is evident that the annual loss to Boston through death and poverty caused by tuberculosis is enormous, probably several millions of dollars, and fully warrants us in expending the large sums necessary for our present work.

Briefly stated, our problem is one of stamping out a disease which causes, according to the latest available statistics (1906), one-tenth of all the deaths in Boston, that is, a total of 1,185 in 1906. The number of consumptives in Boston is probably not less than 10,000, of whom at least 6,000 to 8,000 may be safely estimated to be in the advanced stages. For the incipient cases we have ample provision in the state and private sanatoria, but for the care of the advanced our hospital provisions are most inadequate. The Long Island Hospital has accommodations for about 60

advanced consumptives; various private institutions, a total of barely 200 beds for the same class. The contributions to the general death-rate by scarlet fever, measles, diphtheria, whooping cough, smallpox and typhoid fever combined is only one-third as great as that of tuberculosis, yet the number of beds maintained by the city for these is 450.

#### REPORT OF THE WORK OF THE YEAR.

In the work thus far undertaken, we have attempted to carry out the above general scheme in meeting the appalling conditions in Boston, but for various reasons, chief among them the lack of funds, it has been impossible so far to fully develop it. The first aim has been the establishment of a hospital adequate to the needs of the care of the far advanced, as it seems to be the most pressing and immediate need. During the preparation of plans and the construction of this hospital, an undertaking requiring at least two years, relief for this and other stages has therefore been sought through the development of various other forms of institutions.

Adopting the method of Dr. Philip, I have attempted in the accompanying plan to represent graphically our scheme of organization. A modification of this plan has recently been published by Mr. Kruesi in the annual report of the Boston Association for the Relief and Control of Tuberculosis. Only such institutions are indicated as are intimately associated with our own organization. Those in full line are under our control, those in broken line under other control, but closely associated with us and admitting our patients. It will be seen that the Out-Patient Department is represented as the centre of the plan. The relation of the Out-Patient Department, or dispensary, to the other institutions has been previously discussed.

The double arrow indicates that cases are not only sent from the Out-Patient Department to the various institutions, but after discharge from these are to return to the super-

vision of the Out-Patient Department. In a general way the depth of line is intended to indicate the importance of the institution, and the size of the circle to correspond roughly to the number of patients which each can accommodate. The state institutions, though large, are represented by relatively small circles, as, being for the entire state, the proportion of Boston patients is small.

From the outset we have had the most complete co-operation on the part of all agencies engaged in this and similar lines of work. The most cordial relations have existed between the Consumptives' Hospital in all its activities and the Boston Board of Health, the latter giving us the backing of its authority in dealing with the conditions found among the poor and in carrying out routine inspection, free disinfection, etc. The Board has furnished us with the addresses of all cases reported, and of all those showing positive sputum examinations, which cases our nurses have visited in their homes, bringing them and their families to the clinic for examination. A list of all reported cases of infectious diseases, including tuberculosis, is also received daily from the department, and every tuberculous patient not otherwise cared for is systematically followed up by the nurses.

The hospitals of the city have, as a rule, referred all their cases of phthisis to us for care. In the case of the Massachusetts General Hospital, a special clinic under Drs. John B. Hawes, 2d, and Cleaveland Floyd has received all out-of-town patients, who, on examination at the Out-Patient Department of the Municipal Consumptives' Hospital, have been found to have tuberculosis.

The Boston Association for the Relief and Control of Tuberculosis has furnished us constant and valuable assistance through its various committees, carrying out certain essential work which we have been unable to do. Its carefully prepared catalogue of cases in Boston has always been available for our use. The sanatorium camp maintained by

them on the property of the Consumptives' Hospital in Mattapan has been open to patients referred from our Out-Patient Department. We have frequently called on the association for aid for deserving poor consumptives.

Relief has also been given through the Associated Charities. From the detailed records of the Associated Charities, we are constantly furnished confidential information, not elsewhere obtainable, regarding individuals and families. A by no means small percentage of cases seen in the Out-Patient Department is brought by the volunteer workers of the organization. In the development of the methods of home investigations, the general secretary, Miss Higgins, has permitted us to profit greatly by her knowledge and experience.

Dr. Thomas F. Harrington, Director of Physical Training in the Boston public schools, has given us most cordial support in our plans to reach the children of the public schools, by instructing his corps of school nurses to send all suspected children not under the care of a private physician to the Out-Patient Department for examination. He has also arranged a course of lectures for his nurses, covering the subjects, diagnosis, symptoms, treatment and prophylaxis of pulmonary tuberculosis. By this means a considerable number have been studied who, from association with tuberculosis in the family, or symptoms of debility, are suspicious.

At the dispensary a registry of beds in the various institutions receiving chronic cases is kept, and all vacancies are immediately filled.

Great care has been exercised in co-ordinating all our efforts directed to the care of the patient in his home with those of the tuberculosis clinic at the Boston Dispensary (Dr. Otis), in order that no duplication should occur.

Arrangements have recently been made by which all Boston patients discharged from the State Sanatorium at Rutland are to be sent to the Out-Patient Department on their return to the city, in order that the after treatment may be assured.

The two "tuberculosis classes" conducted in Boston also receive suitable patients whenever a vacancy occurs.

The individual aid given by various benevolent and fraternal associations, too numerous to mention specifically, contributes very largely to the efficiency of our work. Individual contributions also furnish means for sanatorium care, for relief in the homes, etc.

#### THE OUT-PATIENT DEPARTMENT.

The most important work of the year has been conducted in the Out-Patient Department or Dispensary on Burroughs place, which was opened September 11, 1907. One of the assistant physicians, Dr. Cleaveland Floyd, was appointed director of the Out-Patient Department, and has had entire charge of the work. With him are associated five regularly appointed and several volunteer physicians. The number of nurses has been gradually increased until they now number eight.

*Routine of the clinic.* — Every patient is first seen by a clerk and given an accession number and a card with the name and number, which is to be kept by the patient and brought at each visit to the clinic. After the recording of the temperature, pulse and weight, the patient is turned over to one of the nurses, who takes a detailed history on the regular form, shown elsewhere in the report. Then the patient is examined by one of the assistants, who records his finding on the reverse side of the history card. At the close of the examination, each case requiring sputum examination is given one of the Board of Health sputum outfits, numbered to correspond with his card, with instructions to bring a specimen at the next visit to the clinic. All specimens are examined in the laboratory of the Out-Patient Department.

Dr. Francis H. Williams has very generously consented to make an X-ray examination at the Boston City Hospital of all suitable cases, setting apart two mornings each week for

the work, and this excellent opportunity is made use of to a considerable extent.

Tuberculin is also administered diagnostically, the record of the temperature, pulse, etc., of the individual tested being taken and recorded by the nurse visiting the home. A thermometer is furnished the patient, for which he makes a deposit of fifty cents, to be refunded when it is returned. It is frankly admitted that this method is somewhat wanting in accuracy, but we feel that even under such conditions, the results are of much value.

Every new patient has a complete throat examination by Dr. Sullivan, assistant physician in charge of the laryngological work, and is given necessary treatment. (See special blank for report of throat examination.)

Before leaving the clinic all positive or suspected cases are given one of the printed forms of instructions (in English, Yiddish and Italian) and a small paper bag containing five hundred paper napkins. The patient is instructed while away from home to expectorate in the napkin, then place it in the bag and to burn the whole when he reaches home. When in the home directions are given to use the napkins in the same manner, but to burn them immediately. We have found this method far more satisfactory than the use of the pocket sputum flasks, and believe it is open to fewer objections. The expense is inconsiderable. A similar case of disposal of infected waste objects is in use in the clinic, large stiff paper bags placed in open-work metal waste baskets being the receptacle for all material to be destroyed, as throat-sticks, etc. After the clinic each day these bags are burned.

A supply of fresh milk is brought to the Out-Patient Department each morning, and during the clinic is given to any patient needing it. At present an average of fourteen quarts daily is thus dispensed. We have found this a very practical procedure, especially in the children's clinic.

On the day following the first visit to the clinic, the home is visited by one of our own dispensary nurses, who makes

an exhaustive investigation of the social and financial conditions, as indicated on the report card reproduced. Her report is given to the head nurse, and from this and the medical records the director is enabled to determine the most desirable disposition of the patient. This disposition naturally depends on many factors, and is often largely influenced by the hospital accommodations available. Efforts are always made to send the incipient patient to some sanatorium, chiefly the State Sanatorium at Rutland; the moderately advanced to the Day Camp at Mattapan, or the Good Samaritan Hospital, or to one of the "classes" conducted in the city; the far advanced to one of the several hospitals open to this class of cases. Because of the lack of hospital accommodations, the majority must be treated in their homes, and this is accomplished through regular visits of the patient to the clinic for examination and advice, and supervision by the nurse in the home. All members of the family of an infected member are systematically sent by the visiting nurse to the clinic for examination. Necessary relief is obtained through many channels, some of which are mentioned above.

Thus far we have had sufficient funds to supply milk to needy cases free of charge, in January 7,650 quarts, at an expense of \$548, being dispensed. In the future we hope also to furnish eggs.

#### STATISTICS.

The brief time since the opening of the Out-Patient Department does not warrant more than a very general statistical study of results.

The total number of new patients examined from September 11, 1907, to January 31, 1908, was 1,122, and were classified as follows:

Tuberculous . . . . .	368
Suspected . . . . .	192
Non-tuberculous . . . . .	562
Total . . . . .	1,122

Grouped by months they show a uniform and gratifying increase.

#### Total Number of Old and New Cases by Months.

MONTH.	Clinic Days.	Old.	New.	Average Daily Attendance.
September, 1907.....	9	55	163	24.2
October, 1907 .....	16	88	233	20.0
November, 1907.....	18	156	224	21.1
December, 1907.....	16	225	227	28.2
January, 1908.....	18	388	275	36.8
Total .....	.....	912	1,122	

The following table is a summary of the disposal of the 560 positive and suspected cases, including children :

	Total.
Sanatoria :	
State Sanatorium, Rutland . . . . .	25
Sharon Sanatorium . . . . .	1
	— 26
Hospital for advanced cases :	
Holy Ghost Hospital . . . . .	70
Carney Hospital . . . . .	19
State Hospital, Tewksbury . . . . .	18
Long Island Hospital . . . . .	11
Channing Home . . . . .	7
Cullis Home . . . . .	6
Free Home for Consumptives . . . . .	6
Good Samaritan Hospital . . . . .	5
St. Monica's Home . . . . .	2
	— 144
Carried forward . . . . .	170

<i>Brought forward</i> . . . . .	170	
Sanatoria Camps and Convalescent Homes :		
Mattapan Camp . . . . .	26	
Wellesley Convalescent Home . . . . .	13	
Good Samaritan Camp . . . . .	1	
	—	40
Miscellaneous :		
Sent out of state . . . . .	5	
Boston City Hospital . . . . .	2	
Children's Hospital . . . . .	2	
Classes . . . . .	2	
		11
Home . . . . .		339
		—
Total . . . . .		<u>560</u>

The total number of all cases, including the tuberculous, suspected and non-tuberculous, under home surveillance January 31, 1908, was 987.

#### CHILDREN'S WORK.

The work which we have done among children during the past year has been so intimately a part of the general movement in which other hospitals and organizations have participated, that it is impossible to consider it individually. As early as 1905, the Boston Association for the Relief and Control of Tuberculosis undertook the examination of all children of tuberculous families through the various medical clinics in the city. The Association relied largely on the Associated Charities in locating these cases. The children were taken to the nearest clinic, either by the Associated Charities' workers or the Association nurses. Each child was furnished with a card which was to be filled out and returned to the Association. These cards contained a statement of the condition found, and were kept as a permanent record. The undertaking proved so successful and assumed such proportions that in May, 1907, the following special committee was appointed by the Boston Association :

Dr. Charles P. Putnam, *Chairman*,  
 D. John B. Hawes, 2d, *Vice-Chairman*,  
 Miss Alice L. Higgins,  
 Miss Lillian V. Robinson,

Miss Helen Cheever,  
 Rev. Francis X. Dolan,  
 Dr. Cleaveland Floyd,  
 Dr. Henry I. Bowditch,  
 Dr. Edwin A. Locke,

which committee assumed the responsibility for this work. The efforts of the committee were directed to co-ordinating the work of (1) the Associated Charities, (2) the Boston Association for the Relief and Control of Tuberculosis, and (3) the different hospitals and dispensaries treating tuberculous cases. The city was divided into four districts, each district with its own dispensary. This division is given below. It was hoped in this way to reach at least 10,000 children. The following letter was sent to every visiting physician in these various clinics:

The Boston Association for the Relief and Control of Tuberculosis, acting in conjunction with the Boston Consumptives' Hospital Trustees, the Associated Charities, and the School Inspectors, is making an earnest effort to have all children examined and properly treated who have been exposed to tuberculosis in their homes or elsewhere, or who appear to be in such condition as to make them good candidates for the disease. Therefore, with your consent, there will be sent to your clinic, from time to time, children with letters or accompanied by some one who will explain the case, with a request that you examine them as to whether they should remain at school or should be otherwise disposed of.

The committee in charge of this work has divided these children into three groups:

*Class 1.* — Those children whom the physician considers fit to continue at school, but who should be examined at the clinic from time to time and remain under the care of the clinic nurse. Such children are those who have been exposed to tuberculosis, and who are with or without a little fever, perhaps a few glands, no signs in the lungs, and whose general condition is good and will remain so if they are taught a few simple rules of right living.

*Class 2.* — Those children without expectoration, with or without slight signs in the lungs, usually under weight, poorly developed and anæmic, whose general condition is such that they are manifestly unfit to remain at the ordinary public school, even when under close observation, but who should take some radical steps toward improving their health and powers of resistance. Such children we hope to provide for at the Convalescent Home at Wellesley for periods of not less than two months.

*Class 3.* — Children who are manifestly tuberculous, with definite signs in the lungs, and with or without bacilli in the sputum. Such children the Municipal Dispensary is to provide quarters for in the near future.

Will you see that any children examined by you are put into one of these three classes, the card provided for the purpose filled out with the result of your examination and mailed to the Municipal Dispensary on Burroughs place. This dispensary will take charge of the after treatment of the case.

As the Boston Consumptives' Hospital Trustees, with their hospital at Mattapan and their Dispensary on Burroughs place, plan to assume the responsibility of the tuberculosis work of the city, it seems only right to ask them to take charge of these children, a most important part of their work. For purposes of examination, as this dispensary is not easily accessible to all parts of the city, we have divided the city into districts from which children will be taken to the hospital or dispensary designated.

Your clinic will receive children from.....

After the first examination, the Municipal Dispensary on Burroughs place will in most instances, take charge of the case, unless the child is to be sent to Wellesley, in which instance it will be sent by a special agreement with the Children's Hospital.

We hope that this arrangement will meet with your approval, and that we may rely on your co-operation in this difficult undertaking.

The work and its results cannot be better described than by the following report of the committee made to the Association, October 4, 1907 :

Your committee has considered the examination and treatment of children who have been exposed to tuberculosis, and submits the following recommendations, which we believe will provide (1) for adequate care for the infected children, (2) a careful study of this particular problem, and (3) proper protection to the community.

*Examination.* — We believe it is essential that a careful record of all children under the age of sixteen, who have been examined and found to need treatment, should be collected in one file; and we recommend that the Municipal Dispensary of the Consumptives' Hospital Trustees be asked to maintain such a card index, bearing the name, address and age of the child, date, place of examination, and name of the dispensary taking charge of the case.

To further promote co-operation and efficiency, it seems desirable that a uniform blank for the physical record of the case should be adopted by the different dispensary centres, and that these centres be asked to report at designated intervals to the Municipal Dispensary, and to hold their records open for study and conference.

The whole success of the work is dependent upon the seeing of the child by the doctor at frequent intervals, and regular visits by the nurse to the home. In order that this bringing together of child and doctor, nurse and home, may be carried on with continuity, thoroughness and economy, we recommend that the following simple division of the city be accepted, and that the Associated Charities and other agencies be asked to take children for examination, as follows:

Jewish children to Mount Sinai Hospital.

Children in East Boston, Charlestown, North and West Ends, and South End as far as Concord street, to the Municipal Dispensary.

Children living between Concord and Dudley streets and the upper part of Dorchester, to the Children's Hospital.

Children living in Roxbury beyond Dudley street, and in Brighton, to the House of the Good Samaritan.

And we further recommend that any societies sending children for examination be requested to forward to the Municipal Dispensary a list of all children examined, with the doctor's diagnosis, age of child, date, and dispensary taking charge. We

uniform blank contact person

believe, as it is the plan of the Municipal Dispensary to take charge of all tuberculosis work in the city, that the home treatment of children, as well as the general supervision of the work, should be given over to this dispensary as much as possible.

*Treatment.* — Your committee makes the following recommendations for treatment :

1. The group of children who can safely stay in school, but who should be closely watched by the doctor and nurse of the dispensary in charge. We recommend that a list of these children be sent to Dr. Thomas F. Harrington, Director of Physical Training, Boston public schools, and that he be advised that a nurse from the dispensary is visiting them, thus avoiding duplication of effort, and that Dr. Harrington be asked to further co-operate by instructing his nurses to send to the Municipal Dispensary for examination all children who appear to be candidates for tuberculosis.

By the co-operation of the schools and medical and charitable organizations these children can be strengthened and the family taught such matters of hygiene as will promote the health of all its members.

2. The children who do not expectorate, but who either show actual signs of tuberculosis, or who have a family history of the disease and are themselves anæmic and in such condition as to be unfit for the ordinary public school. These should, we believe, be removed to a sanatorium in the country for two months or more.

Your committee respectfully suggest that the urgent need of such a sanatorium be presented to the Trustees of the Wellesley Convalescent Home. The two unused shacks there would furnish twenty beds, and these, with the thirty-six medical cots already in use, would give a capacity of fifty-six. Play and porch rooms are already equipped.

We further suggest that the Consumptives' Hospital Trustees be asked to pay the board of children sent to Wellesley, and the School Committee be requested to assign two or more teachers for the instruction of these children, in order that while gaining health the children may not lose their standing in school.

3. The children who are openly consumptive, with bacilli in the sputum. These have so far been found to be few in number,

but, as they cannot be taken at Wellesley, provision for the care of these is most urgent, and until the Consumptives' Hospital Trustees can provide for them in a hospital or day camp we recommend that the Trustees of the Boston Consumptives' Hospital be asked to consider means of providing for their care. We believe that a few families in the country can be found who will, for a moderate compensation, provide suitable care for such children.

Respectfully submitted,

JOHN B. HAWES, 2D,  
HENRY I. BOWDITCH,  
CLEAVELAND FLOYD,  
ALICE L. HIGGINS, *Secretary*,  
*Sub-Committee.*

In consequence of the advantages which the special facilities at the Out-Patient Department on Burroughs place afford, the cases have been more and more sent to that clinic, and at present the majority are examined and treated there and at the Carney Hospital.

The greatest difficulty has been in finding suitable hospital accommodations for the tuberculous and suspected cases. Through the interest of the Board of Lady Managers of the Wellesley Convalescent Home of the Children's Hospital, we have been able to obtain a considerable number of beds in that institution, as recommended by the committee, and at present have fifteen of the first class ("pretuberculosis") mentioned above under treatment there. It is hoped that in the near future a considerable number of additional beds in this institution may be available.

Arrangements have also been made with the Trustees of the new State Hospital for Crippled Children at Canton, Mass., by which a considerable number of the same class may be admitted to that institution. In both instances the funds necessary for the opening and maintenance of these wards

was furnished by a generous patron of our work. With the increasing number of cases our greatest present need is for a children's camp.

#### MATTAPAN DAY CAMP.

The day camp maintained by the Boston Association for the Relief and Control of Tuberculosis on the Hospital grounds at Mattapan during the past eight months (June 5, 1907, to January 31, 1908), under the direction of Dr. David Townsend, offers many definite suggestions for our future work, and I am therefore giving a brief summary of its results.

During the eight months from June 5, 1907, to January 31, 1908, 252 patients were treated, with a total number of 15,169 days of treatment. The attendance by months and days was as follows:

	Total Attendance for the Month.	Average Daily Attendance.
June (26 days) .....	943	35+
July (31 days) .....	2,126	68½
August (31 days) .....	2,268	73½
September (30 days) .....	2,026	67½
October (31 days) .....	2,237	72½
November (30 days) .....	2,022	67⅔
December (31 days) ..	1,801	60+
January (31 days) .....	1,755	56⅔
Total .....	15,169	

The average daily attendance for the season was 63½+.

Cases grouped according to age show the following:

1-10 years	.	.	.	.	.	5
10-20 "	.	.	.	.	.	51
20-40 "	.	.	.	.	.	153
40-60 "	.	.	.	.	.	40
Over 60 years	.	.	.	.	.	3
Total	.	.	.	.	.	<u>252</u>

Twenty-five cases remained under treatment at the camp less than one week; 20 only two weeks; 12 only twelve weeks; 8 for thirty-four weeks. Of the 252 cases treated, 16, who at the time of admission to the camp had been rejected by Rutland, were sufficiently improved to be admitted to the State Sanatorium. Forty-three of the total 252 patients had previously had sanatorium treatment.

The results of treatment were:

Arrested	.	.	.	.	.	32
Improved	.	.	.	.	.	94
Stationary	.	.	.	.	.	*57
Advanced	.	.	.	.	.	40
Dead	.	.	.	.	.	29
Total	.	.	.	.	.	<u>252</u>

In general the results are most gratifying, considering the fact that all cases treated were advanced, and a considerable number of the very advanced type. Notwithstanding this, 16, or about 6 per cent., were sufficiently improved to be admitted to Rutland, and 62 were able to return to work. The 32 arrested included in this number were apparently restored to full, the remaining 30 only to partial, working capacity.

The average daily cost per day per patient was almost insignificant when compared with the cost of other methods of care.

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\* Including all cases remaining less than one month.

The most important results cannot be expressed in figures, that is, the direct influence which the camp has exerted in teaching so large a number of advanced consumptives how to live, and to care for their sputum in such a manner as to prevent danger to others, and individually in the influence which they have had in their homes and immediate surroundings. If under such crude conditions as have existed in the Mattapan Day Camp it has been possible to hold so large a number of patients, even in the severe weather of our winter months, and to obtain such satisfactory results, we have every reason to expect far better results to a much larger number with the accommodations and facilities which will be furnished by the new plant now under construction. With the constant increase in number of patients at the Out-Patient Department on Burroughs place, we should experience no difficulty in keeping the numbers up to the limit, and in caring for them with much greater satisfaction and ease.

#### RECOMMENDATIONS.

I respectfully submit the following recommendations as seeming to me most important for immediate consideration:

1. The most urgent needs, aside from those of a hospital for the accommodation of advanced cases, are for increased facilities in the Out-Patient Department. The work there has assumed such proportions that we have already far outgrown our present clinic building. It is impossible under existing conditions to carry on our work satisfactorily. The number of patients has increased so rapidly that a much larger staff of assistants must be employed, but as at present arranged we have no place for them to make examinations. Already the laboratory and women's dressing-room are temporarily in use for that purpose. New undertakings which we have in mind for the near future render the need for more room still more imperative.

2. Thus far medicine has been dispensed free by the

Out-Patient Department to a limited extent, and through arrangements with a local druggist prescriptions have been filled for which the Out-Patient Department has paid. During January, 1908, 168 prescriptions were thus paid for by the dispensary at a total expenditure of \$37.35. All drugs for patients in the future should be furnished direct by the Out-Patient Department, and a medical dispensary can be maintained for this purpose at a relatively small cost. When possible the patient may be required to pay the cost price of his medicine, but in most instances they must be furnished free. I earnestly recommend that a medical dispensary be established at the Out-Patient Department.

3. A comprehensive wall exhibit, similar to the one formed by the Boston Association for the Relief and Control of Tuberculosis, if permanently placed in the Out-Patient Department, would serve a much-needed function in our educational work. Steps should be taken to make an exhibit of this kind.

4. The equipment of a dispensary or hospital for tuberculosis is not complete without an X-ray apparatus. The X-ray examination is as important as the other methods of physical examination in common use in the work. With the enlargement of the Out-Patient Department provision should be made for the study of cases by means of the X-ray.

5. A greater and greater need is being felt for relief work in the homes. So great are these demands that it will require far larger funds than can possibly be supplied by the city. A nurse should be sufficiently trained in social work to judge of the exact type of relief needed, the merits of the individual case, and the manner in which it should be applied. When, however, after consultation with her superior, and through her with the director of the clinic, these needs are definitely determined, it should not be necessary for her to drop her work to seek the necessary funds. A committee of relief under the supervision of the head

nurse, or directed by a salaried head, who shall be a trained social worker, would serve as a link between the needs as determined by the nurse on the one hand and the sources of relief on the other. The outside sources to which we can turn for relief are various, *i.e.*, benevolent and fraternal societies, employers, sewing guilds, individuals, etc. I am prepared to submit a detailed plan of organization for such a relief committee, should it be desired.

6. Our list of tuberculous and suspected children is growing rapidly, and it is already impossible to find hospital accommodations for them. Our greatest need in this direction is for facilities for the treatment of the debilitated ones from tuberculous families who do not show definite open tuberculosis, and must be classed as suspected ("pretuberculous"). These children can be very satisfactorily cared for in a day camp similar to the one maintained by the Boston Association for the Relief and Control of Tuberculosis in Mattapan since last June, but with provisions for school instructions. I strongly recommend that immediate steps be taken to establish a sanatorium camp for children at Mattapan.

The roof garden and large yard at the Out-Patient Department on Burroughs place affords a very satisfactory opportunity for the care of a small number of children during the day, and should be utilized for that purpose. It would seem to me wise to reserve this camp for the younger children who cannot go to the Mattapan camp.

7. Following the example of the Phipps Institute and many hospitals, I believe it of much importance that regulations should be made by the Board of Trustees requiring that a post-mortem examination be permitted on every case dying in the Municipal Consumptives' Hospital at Mattapan. The opportunity for scientific work which the material made available in this way would afford would be exceptional. Many problems regarding the course of the disease and

having a very direct bearing on the methods of cure and prophylaxis are still unsolved, and our organization should make provision for the study of them.

8. The present plans for the Consumptives' Hospital make insufficient provision for laboratory research. A thoroughly appointed laboratory is an essential part of the equipment of a tuberculosis hospital, and should be considered in the plans for future development.

9. The Conness estate in Mattapan, on which our institutions are being built, fortunately offers abundant opportunity for the organization of work for patients. Graduated work is a therapeutic measure, and has as much importance as others employed in treating consumptives, and can be as accurately given. In no other way can the resistance of the individual be built up so successfully. Moreover, work has a definite place as a means of preventing the acquiring of habits of idleness, which so frequently happens when a consumptive is given a "rest cure" for a long period. To give the consumptive habits of idleness is to infect him with a disease which is worse than consumption. I trust that this important matter will be thoroughly investigated by the method which seems best to you.

In closing this report, I wish to express to you my deep appreciation of the most generous and considerate manner in which your Board has met our many needs.

Further, I cannot speak too warmly of the work done by my associates on the medical staff. From Dr. Murphy I have had the fullest co-operation in all that has been undertaken. The actual work of the organization of the Out-Patient Department has been essentially in the hands of Dr. Floyd, its Director, and to his initiative and faithful direction is largely due the success thus far attained in this branch of the work. Dr. Sullivan has performed unassisted the entire work of the Laryngological Department, examining every new case, and giving careful treatment to all requiring it. His service merits the highest praise.

It is impossible for me to do justice to the admirable work done by Miss Upjohn and her corps of nurses, both in the clinic and in the home. They have all shown admirable tact and judgment in dealing with the difficult problems arising in the home visitation, and the gratifying results which they have accomplished offer nothing but encouragement for our future labors in this the most important field of our work.

Respectfully submitted,

EDWIN A. LOCKE,  
*Chief of Staff.*

SUPERINTENDENT'S REPORT.

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*To the Trustees of the Boston Consumptives' Hospital :*

I have the honor to submit my report as superintendent for the year ending January 31, 1908.

The work of the development and organization has progressed as rapidly as was possible during the past six months, and some definite data can be gathered from the several items under supervision.

The work of development of plans for the first ward building to be erected at Mattapan, together with the power house and connecting tunnel, was already under consideration by the architects when I assumed my position as superintendent in July. In conjunction with the building committee of the Board close definite study was begun forthwith, together with the study of improvements at Mattapan. The Out-Patient Department already under way in July assumed definite shape in September, and this remodelled house was equipped and opened September 11, 1907. With the opening of this department a centre for patients was established, and the admission of patients to the department's beds in private hospitals, up to this time done by a special physician, was transferred to the Out-Patient Department. A nursing staff was organized under the direct supervision of Miss Elisabeth P. Upjohn.

From September 11, 1907, to February 1, 1908, 1,122 patients have been examined at the Out-Patient Department; 333 patients too ill to come for treatment have been treated in their homes. During the year 227 patients have been treated in the hospital beds under our control. Tables are appended showing this in detail.



WAITING ROOM, OUT-PATIENT DEPARTMENT.



An office was established with the assistants necessary to begin the work; and other officers have been employed to maintain the house in a proper manner. Study of the problem of relief of the consumptive has developed a definite plan of organization and places the Out-Patient Department as the central bureau in the caring for the patients.

Consideration of the work shows how important is the work of the visiting nurse and how essential to the success of the work is the development of the social aspect. Details in this regard must be met, regulated and arranged as they arise and the work extends and advances.

The Out-Patient Department, an old house on Burroughs place, is secluded, quiet, and at the same time central and easy of access. From the first day of its opening it became apparent that the day was not far distant when it would be outgrown. This is to-day all the more apparent.

Clinics are held on four mornings each week, and to meet the demand of opportunity for clinical examination further clinics will soon have to be opened.

With the increasing numbers of patients and the more extensive records which must be kept if we would cover the work, more clerical assistants must be added. We are unable to provide room for these assistants in our present office.

The women's examining room is too small for the ordinary work done from day to day. The laboratory has been encroached upon and a part of it has been screened off as an examining room.

The heating plant consists of two furnaces of an old type. These were repaired last summer and have been used all winter. Were this winter severe it would have been impossible to heat the rooms by their use. A hot-water plant would provide heat for the entire house at a cost of maintenance less than under the present system. The house should receive one coat of paint throughout some time this fall. This I feel is necessary after one year's use.

After each clinic the windows and doors of the rooms are

opened, the linen is collected and fumigated and set aside for the laundry. The floors are mopped with an antiseptic solution, and chairs and settees are washed with antiseptics. Waste baskets in the form of heavy paper bags are collected and burned at once.

Many of the patients coming for examination feel the strain of the journey; these are provided milk. This small item has been of much benefit.

Many patients receive milk in their homes. These are recommended by the nurse on the district who investigates the home and social conditions. After such investigation suitable cases are furnished milk. This is growing in extension and much good is done. In this regard I might say one word about relief in general.

Many questions have arisen which have been the source of much anxiety and concern. The active and hearty co-operation of the City Charities, the Associated Charities and private charitable associations, the parish priests and the ministers has been of invaluable assistance in our work and has been of untold benefit to the patient.

The work of the nursing staff has been most praiseworthy. The nurses are hard-working, enthusiastic, conscientious and sympathetic. From many sources words of praise constantly are spread, occasioned by personal observation of the good work which is done.

The work with the architects and the engineers on the plans of the first ward building, corridor, power house and tunnel came to a close in January with the calling for bids for the erection of these buildings.

Late last year from the study of the Out-Patient Department it was decided to erect a day camp and an open ward building of the shack type for the use of patients who could be about all day, and a special appropriation was granted for this purpose. Plans were started with the architect for these buildings. With this study it was apparent that a day camp must be erected much greater in extent and scope than

the day camp maintained at Mattapan during the summer by the Boston Association for the Relief and Control of Tuberculosis, and the present plans have been extended to accommodate many more than was at first contemplated.

A building of much better construction has been planned, and the erection of the day camp building is now under way.

Further consideration of the open ward cottage or shack shows that a more elaborate building must be erected than was at first considered. This is demanded by the condition of the patients whom it will serve. In order to do this, provision has been made in the request for the appropriation for this year.

The work on the day camp will be rushed, and it will be occupied some time in April.

Plans and work on the open ward or cottage will progress as rapidly as is possible.

With work started at Mattapan and a day camp and cottage soon to be opened, some definite policy should be adopted in the general organization of the department at Mattapan, this policy to be in the main the permanent policy of management and development.

Much routine work is to be done which is quite independent of any definite scheme of development. A superintendent farmer with sufficient farm laborers should be employed to keep up the farm.

Such stock as is necessary for the present should be purchased and maintained, and should be added to as is needed from time to time. Farming tools and equipment should be purchased. Some improvements and repairs should be done on the farm buildings and the barn in order to keep them in good order.

Quarters for male help can be provided in a portion of the farmer's cottage, which was renovated last summer. Furniture for this house will have to be purchased. This addition will put this house in first-class condition. In order to provide temporary quarters for the nurses until the nurses' home is

erected, the Conness house will need considerable renovation and furniture.

The business offices can be located in this house until such time as the administration building is completed.

For some time to come I feel that dining quarters for the male help and some of the female help must be provided in the dining room of this house.

With the extension of the 12-inch water main which was partially laid last fall, and with the provision for standpipes and hydrants completed next summer, a good supply of water will be guaranteed for domestic and fire purposes.

The proposed extension of the sewer to provide for the day camp and the cottage will be of much benefit, and will relieve the cesspool, which proved inadequate last summer.

I feel that the outlook at Mattapan means active, aggressive work during the coming year, in order that a high standard be maintained on the farm and that good work be done in the day camp and cottage.

The general work of cleaning and stripping the place where necessary will mean much labor, and with building operations going on much effort must be made to keep the grounds in order.

The work on the grounds at Mattapan should be begun just as soon as the appropriation will allow.

With the growth and development of the hospital at Mattapan, the business centre of the department should be located there, while the centre of medical relief will be at the Out-Patient Department.

In connection with our work many private individuals have contributed articles of clothing for the use of the patients; these have been sent to the Out-Patient Department for distribution. Kind friends have also sent food for the same purpose. These are gratefully acknowledged.

For the purchase of tents, cots and out-of-door sleeping outfits, interested friends have supplied the necessary funds for several needy patients. It will be a satisfaction to these

friends to know that the patients greatly appreciate these articles and have benefited by their use.

The beds at the disposal of this department in the private hospitals have been filled during the year, and have been of untold worth in the relief of the suffering patients.

The city ambulances have responded to all of our calls with unfailing promptness and courtesy. The service is acknowledged with much appreciation.

I beg to acknowledge the faithful and untiring work of the superintendent of nurses and her corps of nurses, the co-operation and the advice given by the medical staff, the kind interest shown by many friends, the co-operation of other city departments shown in many ways. I am deeply grateful to the Board of Trustees for the many kindnesses shown me and for the constant support given me.

Respectfully submitted,

SIMON F. COX.

SUPERINTENDENT OF NURSES' REPORT.

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TO SIMON F. COX, *Superintendent*:

The work of the nursing staff began with the opening of the Out-Patient Department, September 11, 1907; the staff was composed at that time of three nurses under the direction of a Superintendent of Nurses. This number was increased from time to time because of the growing attendance at the clinics. The present force numbers eight.

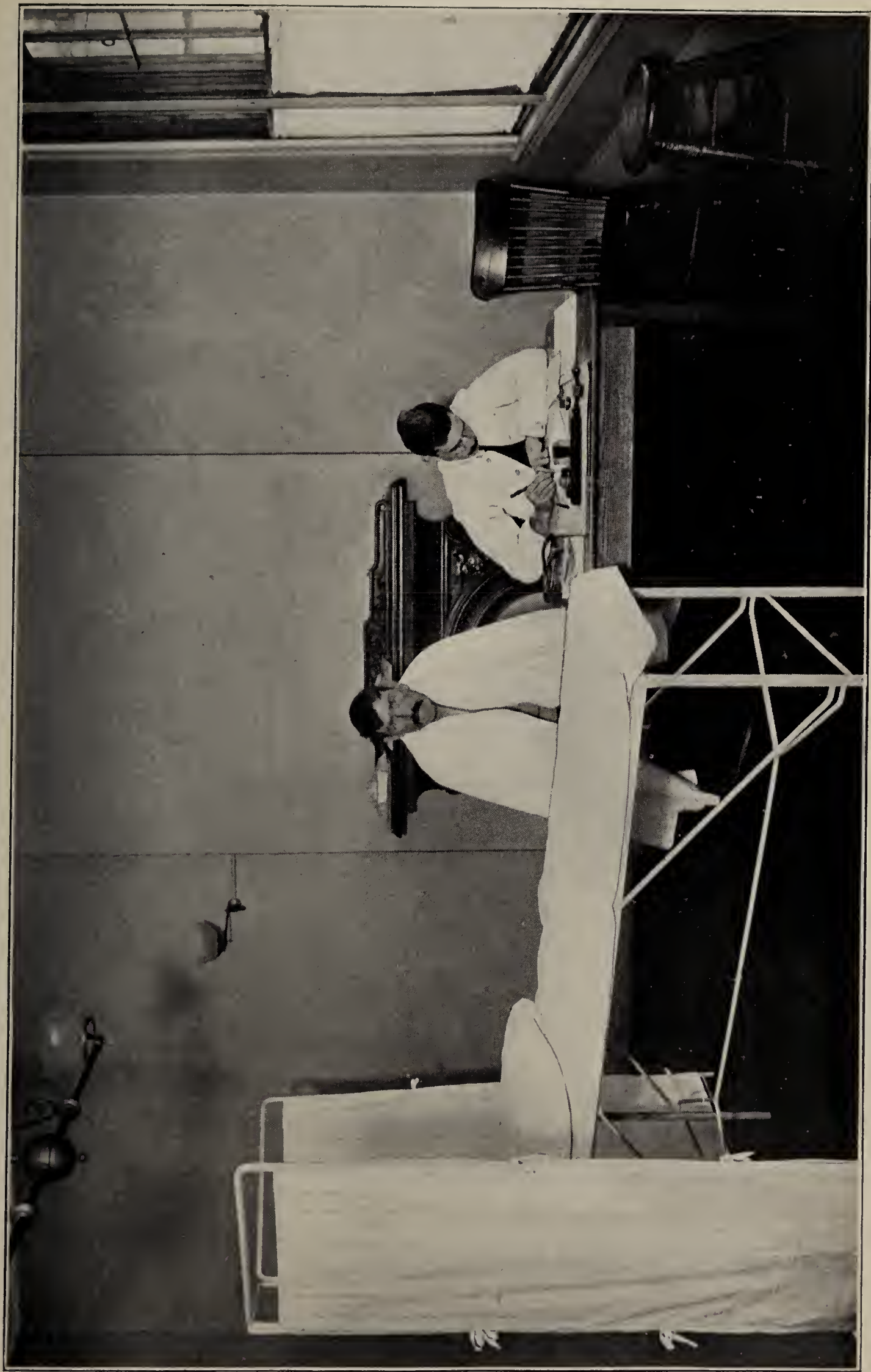
Applicants must be graduates of recognized general training schools for nurses, and it is desirable that they have some experience in the care of tuberculous patients.

Because of the importance of social work in the treatment of this disease in the patients' homes it is especially desirable that they have training in social work.

This work differs much from that in hospitals and out-patient departments in general, and the success of the nurse depends largely on her comprehension of and ability as a social worker.

A three months' probation period serves to determine this essential quality. During the period of probation fundamental principles of social work are taught and put into practice. It is many times observed that the most efficient hospital or private nurse is a failure in district work.

The nurses' work is divided into the clinical nursing at the Out-Patient Department and the special nursing in the homes. The clinical nursing is similar to that in any out-patient department. Here the nurse first forms the acquaintance of the patient, taking the "history" of his sickness, records his weight, temperature, pulse, etc., and gives him his preliminary instructions in the nature of tuberculosis — how it is spread, how it is contracted and how it may be



ONE OF THE EXAMINING ROOMS FOR MEN, OUT-PATIENT DEPARTMENT.



prevented and cured. As the keynote in this crusade against tuberculosis is "prevention," the importance of proper disposal of sputum is shown the patient and instruction is early and often given in the care of the sputum.

The home visiting is a study of the conditions of the patient and his family at his home. A specimen card of the nurses' investigations appears elsewhere.

Many complex problems are considered in this investigation, the solution of which depend much on the thoroughness and skilfulness of the nurse. The home is studied and the patient and family instructed how to adapt themselves and their homes to those requirements essential to prevent the spread of disease from those afflicted to those not afflicted. Homes are rendered as hygienic as is possible. Patients are taught principles of body and home cleanliness, proper manner of preparing food, proper food, proper rest, exercise, etc.

The perplexing question of "relief" usually comes to "conference" with the superintendent of nurses, the physicians and the charitable societies devoted to this work.

The importance of this work of relief cannot be overestimated or overstated. Co-operation of all interested in this study has been of invaluable assistance to us in the work.

Many patients do not come to the Out-Patient Department, being too ill to make the journey. These patients receive the home bedside care of the nurse.

This has formed a considerable part of the nurses' work in the home, and results have been very gratifying.

Patients have very willingly disposed of hangings, carpets, etc., which are dangerous in the home, and transformations of dull, unpleasant rooms to more cheerful and hygienic add to the safety of the family. It has frequently happened that furnishings have been taken for debt from infected homes without provision for fumigation. Those furnishings offered for sale to innocent families may be the source of contagion. Our nurses have traced these articles and are reporting to

the Board of Health. Prompt action has been taken and fumigation done.

The nurse, as the investigator of the home conditions, recommends the providing of milk for the needy patients. This has proved a great boon, and the nurse can testify to the good done.

Each nurse is taught that it is her duty in the home to help every member of the family to a more sanitary method of living, and that to do her part in the social movement for improved housing conditions is of equal value with her nursing duties. Members of families where tuberculosis exists are urged to be examined by physicians. This is especially advocated in the case of children.

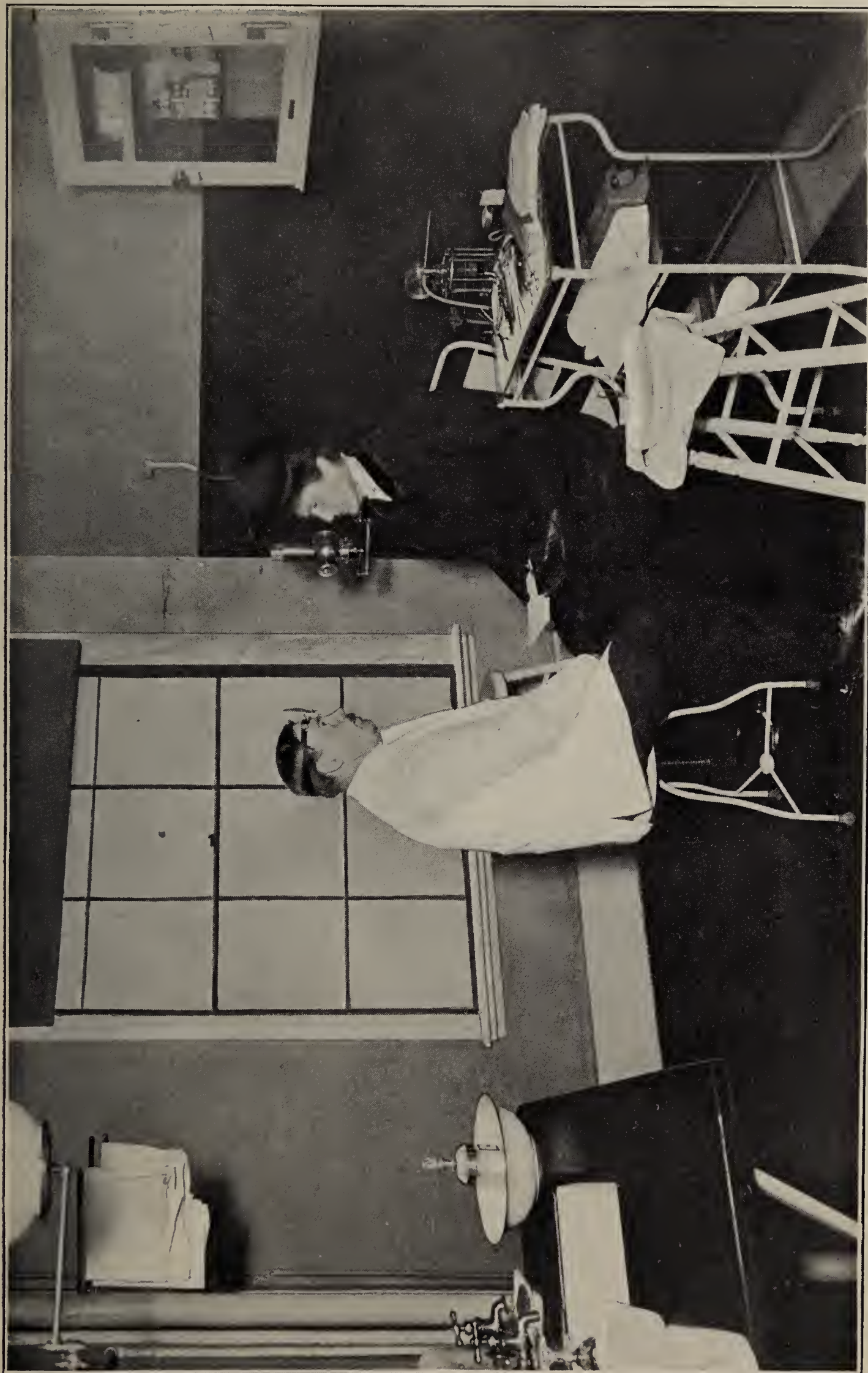
The city is divided into districts, and each nurse is assigned to a district. As the work increases nurses are added and new districts formed.

At present the districts are as follows:

District 1, East Boston. District 2, Charlestown. District 3, North End. District 4, West End. District 5, the City Proper and South End to Northampton street. District 6, South Boston. District 7, south of Northampton street to Ruggles street, West Roxbury, Brighton, Allston, Forest Hills and Roslindale. District 8, Roxbury Crossing District, Dorchester and Neponset.

Each nurse attends the weekly conference of the Associated Charities of her district. Here she not only has the advantage of discussion and advice regarding her own patients, but she hears the reports of the other cases and becomes familiar with the methods of the association's skilled and experienced workers in the management of home problems where calamities other than illness have been the occasion for outside aid.

This arrangement has been made through the courtesy of the Associated Charities, and is of great value to the nurses and their patients.



THROAT EXAMINING ROOM, OUT-PATIENT DEPARTMENT.



Fortnightly conferences are held in the nurses' room at the Out-Patient Department in the evening for the discussion and study of social subjects. At each meeting nurses are detailed to report on some one of Boston's charitable or philanthropic organizations. This report covers the history of organization and scope of each institution. General discussion follows.

Clinics are held four mornings each week. Nurses assist at the clinics, and then make home visits. Reports are written at the close of each day. The nurse is under medical supervision while in the department, as the work is a severe tax on her physical strength, and it is the policy that the nurse shall not get run down.

Each nurse is provided with a nurse's bag, the contents of which are listed elsewhere.

Car fares are provided for use on the district only. This enables the nurse to cover ground more easily, and to spend more time with the patients in the homes. A "loan closet" provides many articles for the care of bed patients in their homes. These articles are loaned, and are taken to the patient by the nurse, who is responsible for their return.

Kind friends have provided such articles as blankets, coats, chairs for patients' out-of-door use. This is most praiseworthy, as it enables the poor patients to enjoy comforts and necessities.

Through the kindness of friends Christmas baskets were arranged by the nurses for eighty-one families.

Tables have been prepared showing much valuable data obtained from the nurses' work in the homes.

Much work is still to be done, and as time goes on this department will have greater scope and further opportunity to do good.

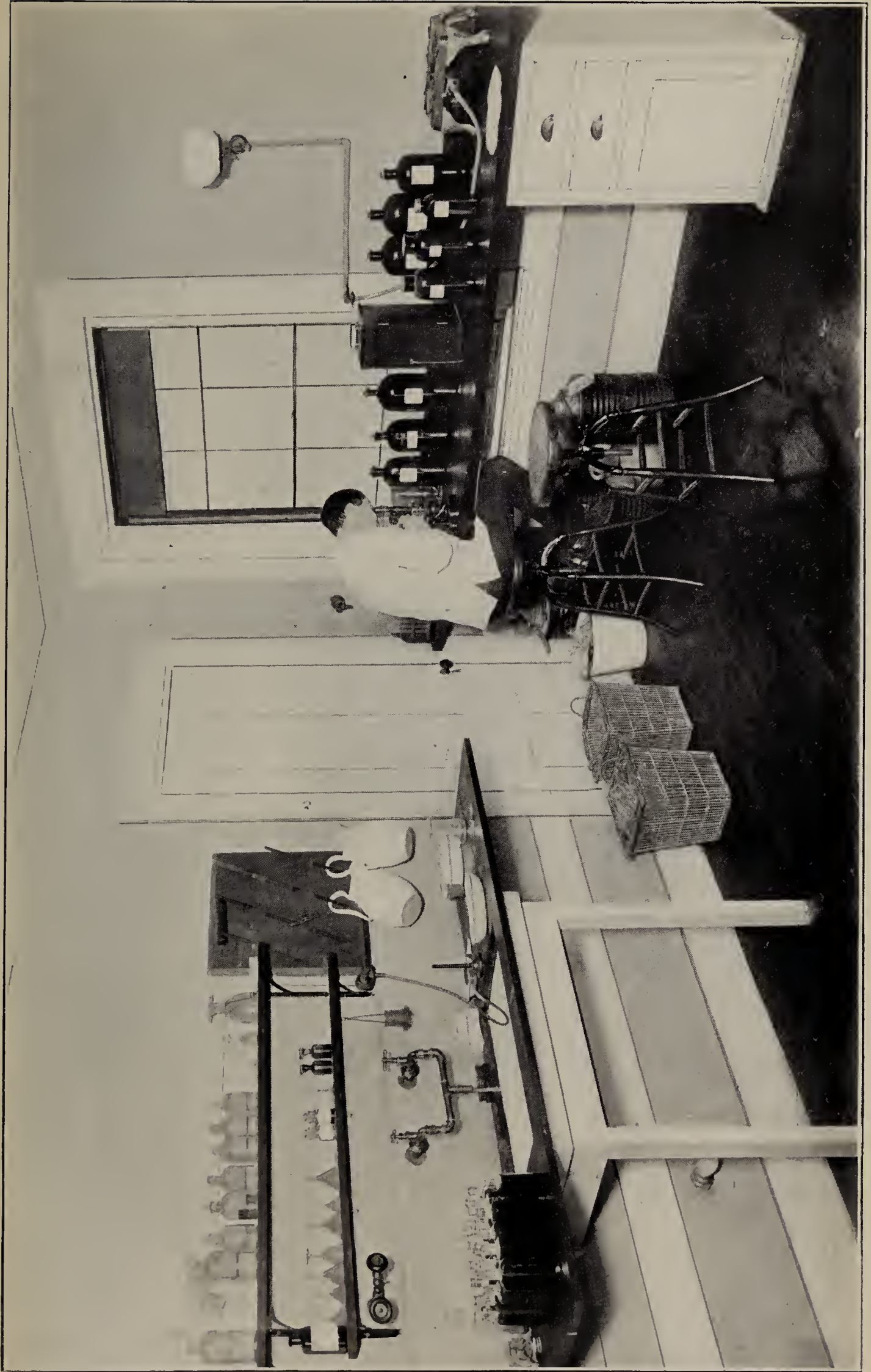
The necessity of the establishment of branch offices in each district, giving desk room and telephone service, is apparent as the work increases. This will allow more time on the district. Such branch offices could be in conjunction with

some already equipped social centre, as Associated Charities, day nursery, church or social club, or the out-patient department of some hospital.

In closing, I wish to thank the nursing staff for their sympathetic, loyal and zealous work, and the medical staff for their direction, support and encouragement generously given.

Respectfully submitted,

ELISABETH P. UPJOHN,  
*Superintendent of Nurses.*



LABORATORY, OUT-PATIENT DEPARTMENT.



## FINANCIAL REPORT.

## CONSUMPTIVES' HOSPITAL DEPARTMENT.

Appropriation . . . . .	\$40,000 00
Rebate on drains . . . . .	125 00
	<u>\$40,125 00</u>

*Expenditures.*

Care of patients in hospitals, December 1, 1906, to December 1, 1907 . . . . .	\$16,127 06 ✓
Out-Patient Department :	
Alterations . . . . .	2,860 29
Furniture and furnishings . . . . .	1,570 30
Maintenance, September 11, 1907, to November 1, 1907 . . . . .	2,283 21
Salaries, January 1, 1907, to January 1, 1908 .	5,333 34
Office expenses, December 1, 1906, to December 1, 1907 . . . . .	380 27 ✓
John C. Potts, Herbert F. Price, trustees' travel- ling expenses * . . . . .	100 00 ✓
Improvements at grounds, Mattapan . . . . .	4,392 83 ✓
Improvements, farmer's cottage, Mattapan . . . . .	3,425 32 ✓
	<u>\$36,472 62</u>
Balance unexpended . . . . .	3,652 38 ✓
	<u>\$40,125 00</u>

## BUILDINGS AND EQUIPMENT. †

Appropriation, December 28, 1908 . . . . .	<u>\$17,000 00</u>
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\* \$150 was drawn from city treasurer; \$50 was returned.

† No expenditures have as yet been made from this appropriation

## HOSPITAL FOR CONSUMPTIVES.

Balance of appropriation . . . . .	\$83,103 82
Appropriation, August 1, 1907 . . . . .	140,000 00
	<hr/>
	\$223,103 82
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*Expenditures.*

Architects' fee . . . . .	\$2,000 00
Architects' competition . . . . .	200 00
Printing . . . . .	466 67
	<hr/>
	\$2,666 67
Balance unexpended . . . . .	220,437 15
	<hr/>
	\$223,103 82
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## INCOME.

Rent at Mattapan, February 1, 1907, to February 1, 1908 . . . . .	\$360 00
Rebate, Boston Mailing Company . . . . .	13 98
Dividend and rebate on insurance policy . . . . .	48 98
	<hr/>
	\$422 96
	<hr/>

PATIENTS IN HOSPITALS, FEBRUARY 1, 1907, TO JANUARY 31, 1908.

HOSPITAL	Remaining Feb. 1, 1907.	ADMITTED.			DIED.			DISCHARGED.			REMAINING.		
		Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.	Males.	Females.	Totals.
Holy Ghost.....	26	128	44	172	59	24	83	56	13	69	35	11	46
Carney.....	9	29	20	49	15	6	21	16	11	27	5	5	10
St. Monica's.....	2	....	6	6	....	1	1	....	2	2	....	5	5
Totals.....	37	157	70	227	74	31	105	72	26	98	40	21	61

TABLE SHOWING THE TOTAL NUMBER OF PATIENTS VISITED BY NURSES BY MONTHS.

[Clinical cases are those who have come to the Out-Patient Department. Non-Clinical are those reported too ill to attend the Out-Patient Department.]

MONTH.	Clinical.	Non-Clinical.	Total.	Children Included.
*September } October..... }	396	71	467	123
November.....	220	60	280	115
December.....	229	115	344	106
January.....	277	87	364	131
Total.....	1,122	333	1,455	475

\* September and October are combined, as the Out-Patient Department was opened on September 11, 1907.

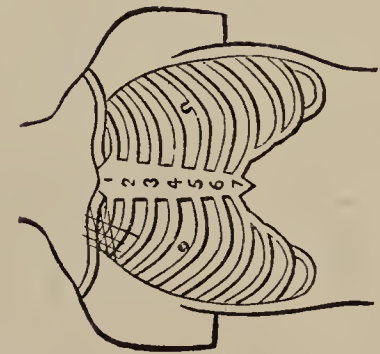
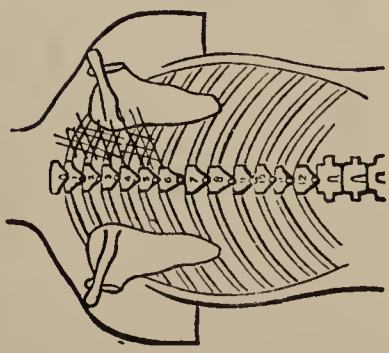
## SPECIMEN EXAMINATION CARD

No. 1260 OUT-PATIENT DEPT BOSTON CONSUMPTIVES' HOSPITAL

Diagnosis *Phthisis*  
 Date *Jan. 3, 1905* Class *I* Dr. *Jan. 3*  
 Name *W. — Sarah R.* Age *32* M F Color *white* M S. W. Ref by *Visiting Nurse M. S.*  
 Address *Bostick place Roxbury* Reason for coming to Clinic *Husband has phthisis*  
 Birthplace *Killbuck, N. York* Civil Condition *citizen* How long in Boston *23 years*  
 Occupation *Disinfectant* Where *1124 Tremont st.* Stopped Work *0*  
 FAMILY HISTORY. F. *D. aged 61* M. *D. aged 32* B. *Living & well* S. *23 living & well* H. *W. has 4 tub.*  
*Known of no phthisis in her family*  
 G's *Dead* Cause *3 G's. 2 m. 2nd. 3rd. 4th. 5th. 6th. 7th. 8th. 9th. 10th. 11th. 12th. 13th. 14th. 15th. 16th. 17th. 18th. 19th. 20th. 21st. 22nd. 23rd. 24th. 25th. 26th. 27th. 28th. 29th. 30th. 31st. 32nd. 33rd. 34th. 35th. 36th. 37th. 38th. 39th. 40th. 41st. 42nd. 43rd. 44th. 45th. 46th. 47th. 48th. 49th. 50th. 51st. 52nd. 53rd. 54th. 55th. 56th. 57th. 58th. 59th. 60th. 61st. 62nd. 63rd. 64th. 65th. 66th. 67th. 68th. 69th. 70th. 71st. 72nd. 73rd. 74th. 75th. 76th. 77th. 78th. 79th. 80th. 81st. 82nd. 83rd. 84th. 85th. 86th. 87th. 88th. 89th. 90th. 91st. 92nd. 93rd. 94th. 95th. 96th. 97th. 98th. 99th. 100th. 101st. 102nd. 103rd. 104th. 105th. 106th. 107th. 108th. 109th. 110th. 111th. 112th. 113th. 114th. 115th. 116th. 117th. 118th. 119th. 120th. 121st. 122nd. 123rd. 124th. 125th. 126th. 127th. 128th. 129th. 130th. 131st. 132nd. 133rd. 134th. 135th. 136th. 137th. 138th. 139th. 140th. 141st. 142nd. 143rd. 144th. 145th. 146th. 147th. 148th. 149th. 150th. 151st. 152nd. 153rd. 154th. 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PHYSICAL EXAM... Jan 3, 1908... Subjective... Emaciated... Objective...  
 Wt 119 1/2 Temp 99.6 Pulse 100 Resp 24 Color of Mucous Membranes pale Skin pale  
 Tongue pale Teeth poor, Pharynx & secretion tonsils enlarged  
 Fingers normal Bones normal Joints normal GLANDS  
 THORAX Normal Round, Flat, Narrow Deep, Large Small charicled prominent, especially at  
 Circumf 68 cm Expansion 2 cm Spirom... Excursion at Bases - right  
 Depression above Clavicles - on right Apical Outlines - diminished st  
 HEART not t... Apex palpable, 5th space, nipple line  
 Rhythm normal Second Sounds somewhat sharp... BORDERS  
 Murmurs none

Pulse equal & synchronous... Volume 900... Tension...  
 Pt apex dull to 2nd rib and to midscapular region  
 LUNGS Bronchoves respiration. No rales  
 V & T fremitus increased



Incipient...  
 Marked...  
 Advanced...  
 Acute Miliary...  
 STAGE  
 Favorable...  
 Doubtful...  
 Unfavorable...  
 PROGNOSIS

Sputum... Tubercle bacilli found 1/4/08... Urine...  
 Abdomen normal... Iesticles... Menstruation normal...  
 Disposition To remain at home. Treatment at Day Camp

## THROAT NOSE AND EAR

No. 1207 Date Jan 19, 1908 Class A. M., P. M., Night. Dr. John J. Sullivan  
 Name A. Gray Age 33 M. W. White, M. N. Negro, Address 81 B — St. Boston  
 Diagnosis: Tentative Nasal Polyp Final Nasal Polyp  
 HISTORY Known for 2 years + difficult Enlarged tonsils  
nasal breathing. Chr Cat. Laryngitis T.B.  
 SUBJECTIVE SYMPTOMS: Onset Gradual Duration 2 years  
 Pain: Odynphagia No Odynphonia No Sensitive to Touch No  
 Voice: Euphonia No Dysphonia No Aphonia Yes Weak Yes Hoarse Yes  
 Deglutition: Dysphagia Yes Dryness Yes Dripping Yes  
 Respiration: Dyspnoea Yes Nasal Normally difficult  
 EXAMINATION: Nasal Chambers Polyp Right Polyp  
 Left Polyp Nasal Septum Negative  
 Choanae Negative Nasopharynx Negative  
 Mouth clean Teeth fair Tongue clean  
 Oropharynx negative Fauces negative Lingual Tonsil negative  
 Pharyngeal Tonsil enlarged tonsils Mucous Membrane negative  
 Larynx Cords reddened and thickened; slight superficial ulceration  
and thin serous secretion leaking between  
arytenoids  
 Ears negative  
 TREATMENT Menthol gr. iii Prognosis Prognosis  
 Remarks Eucalyptol gr. ii  
Benzoin 3 -  
 Sig: Spray throat t.i.d.



serous secretion  
reddened cords

Throat Dept		SUBSEQUENT VISITS.		O. P. D. Boston Consumptives Hospital.
DATE	TREATMENT		REMARKS	
	Local	General		
Jan 10 1908	appl		of Menthol, Eucalyptol & Benzoinol Solution (Pharynx and Larynx), Iodine Potass. Iodid. & Glycerine sol. (Tonsils) Menthol etc. solution (Larynx) R Syr. Hydriodic Acid, $\frac{3}{4}$ - t.i.d. Iodine Potass. Iodid et Glycer. (Pharynx & tonsils) Menthol, Eucalyptol & Benzoinol solution (Larynx) much improved tone of voice. Less dis- comfort in speaking. Operation & removal of nasal polypic (cocaine & adrenalin.)	
" 11				
" 12				
" 14				
" 22				

TABLE SHOWING NUMBER OF NURSES ON VISITS AT PATIENTS' HOMES, AND AVERAGE DAYS PER WEEK, WITH TOTAL CALLS MADE.

MONTH.	Nurses.	Average Number Days per Week for Each Nurse in the Homes.	Total Calls.
October.....	3	$3\frac{1}{2}$	936
November.....	5	$3\frac{9}{10}$	1,116
December.....	5	$3\frac{9}{10}$	1,505
January.....	8	4	<del>3,557</del> 2,187
			5,744

A study of the number of persons in the families of 764 patients :

Number in Family.	Number in Family.
1 . . . . . 63	7 . . . . . 71
2 . . . . . 88	8 . . . . . 53
3 . . . . . 111	9 . . . . . 29
4 . . . . . 124	10 . . . . . 14
5 . . . . . 110	More than 10 . . . . . 8
6 . . . . . 93	

Table showing the number of rooms occupied by the patient and the family :

Number of Rooms.	Number of Rooms.
1 . . . . . 71	4 . . . . . 214
2 . . . . . 49	More than 4 . . . . . 328
3 . . . . . 102	

Table showing data on sleeping room, bed, food and clothing :

Separate bed . . . .	431	Insufficient food . . .	319
Separate room . . . .	319	Insufficient clothing . .	119

A study of the character of the dwelling house of the patient, from an investigation of the homes of 764 patients :

Private house . . . .	80	Apartment house . . .	71
Lodging house . . . .	76	Tenement house . . .	537

A study showing the method of disposal of sputum, from a careful investigation of 764 patients. Data taken from nurse's first visit to patients' homes after first instructions :

Sputum burned . . . .	336	No sputum . . . . .	228
Cuspidors . . . . .	51	Careless . . . . .	149

The data above is taken from a study of 764 positive cases.

NURSES' CARD.

OUT-PATIENT DEPT, BOSTON CONSUMPTIVES' HOSPITAL.

No. *Home Care* Date, *Dec 31, 1907* Assigned, *Mary Smith* Ref. by *J. L. N. A.*  
 Name, *M*, *Amie.* Address, *— Tudor street, So Boston* Floor, *1st* Ward, *13*  
 Age, *26* Nativity *Personal Ancestral* *Amiecan* *British* How long in Boston, *18 yrs.*  
 Occupation, *Housewife* Character of Place, *Dutty 1/6 mills* Employed, *—*  
 Present Work, *0* Since, *6 mos.* Effect, *No gain*  
 Present Circumstances, *Poor, husband a tramster, irregular employment, drinks*  
 Income before illness, *—*  
 Rent, *\$2.00 wk* Taxes, *0* Insurance, *0* After, *—* Voter, *0*  
 Assistance needed, *Yes* Given by *St. Al's parish*  
 Food Quantity, *Poor, irregular amounts* Quality, *Poor, tea, bread.*  
~~Household~~ Tenement, *Old, wooden* No. rooms in dwelling, *5* No. families in dwelling, *1*  
 Character Patient's Room, *10 x 10 x 8 - very dutty, bare floors* Separate Room, *Yes* Separate Bed,  
 Ventilation, Condition Halls, Floors, and Sewerage, *2 windows (open) Halls bare, dutty, Floors bare, dutty.*  
 Porch, Tent, Roof or Garden, *None* Sewerage closed.  
 Observation of Instructions, *Poor* Disposal of Sputum, *St sputum in when sick*  
 Catholic, ~~Protestant~~, *Jewish*, — Parish, *St Augustines* School, *2 school children { numerous*  
 Change of Residence, *Bigelow*

Name of near relative or friend, *Fr. Russell St Augustines Parish*  
 Names, ages, occupations, income of family  
*Cornelius* b. *1870* *Tramster* *8* No examined, *5 ch Jan 6/08* No going to School *2*  
*St* *Amie* . *1872* *Housewife* *Phthisis* *iii* *not ex*  
*William J* . *1897* *Bigelow School* *not ex* *Sent to Melleury Jan 18/08*  
*Francis* . *1902* . . . *Ex. Jan. 6/08*  
*Grace* . *1899* *Tramster School* . . .  
*Cornelius* . *1902* . . .  
*Sarah* . *1901* . . .

DATE	Pulse	Temp.	Resp.	Cough	Expect.	Bowels	Digest.	Sleep	Inquire as to hemorrhages, night sweats, pain, amount of food.
12-31-07	A M 108	99.2	30	Freq	L amt	Reg	Poor	Poor	Case referred today by L. S. N. A. Pt. having chill. Nursing case. Insufficient clothing. Reported these conditions to the parish priest.
1-1-08	A M 98	98	24			Loose		"	Daily nursing care. Pt. using paper napkins. The Sewing Society of St. Augustine's Church has supplied sheets and night gowns, also food.
1-2-08	P M 100	104	30	"		"	"	"	Nursing care (chill)
1-3-08	100	105	30	"		"	"	"	
1-4-08									Pt. resting. Did not awaken.
1-5-08	120	100	40					"	Pt. very much weaker.
1-6-08	96	102.2	32	"		"		"	Children all examined at clinic. William is pre-tubercular. No place to sleep alone.
1-7-08	116	96	40	"		"		"	Found Cecelia taking a nap on mother's bed. Got sister to take children temporarily.
1-8-08	142	106 (chill)	30			"		"	Nursing care. Pt. receiving milk from B. Con. H.
1-9-08									Patient died. Had mattress burned. Reported to B. of H. for fumigation.

## NURSES' EQUIPMENTS FOR USE IN THE PATIENTS' HOMES.

Scissors.	Corrosive tablets.
Forceps.	Carbolic acid, 95 per cent.
Probe.	Boric acid powder.
Catheter.	Zinc oxide ointment.
Thermometer.	Medicine dropper.
"    rectal.	History blanks.
Safety pins.	History folder.
Soap box.	Street directory.
Soap.	City map.
Dressing bowl.	Note book.
Nail brush.	Small scratch pad.
Tooth picks.	Pencil.
Comb.	List district physicians.
"    fine tooth.	Car tickets.
Towels.	Paper napkins.
Apron.	"    bags.
Gauze.	Medicines.
Absorbent cotton.	Boston Consumptive Hospital
Bandages, gauze.	Advice to Patients in three
"    flannel.	languages.
Compresses.	Boston Consumptive Hospital
Tongue depressors.	Out-Patient Department Ad-
Matches.	mission card.
Vaseline.	Electric light.
Alcohol.	

## LOAN CLOSET SUPPLIES.

Sheets.	Bulb syringes.
Pillow cases.	Rectal tubes.
Hot water bottles.	Bed pans.
Air rings.	Urinals.
Ice bags.	Feeding cups.
Fountain syringes.	Blankets.

## DONATIONS.

Miss R. E. Harris . . . .	Books, magazine, 1 air ring.
A Friend . . . . .	Magazines.
Miss Parker . . . . .	1 5-pound box graham crack- ers, 9 knitted helmets.
Mrs. ——— . . . . .	Knitted helmets.
Mrs James S. Little . . . .	Flowers, 2 dozen glasses jelly, $\frac{1}{2}$ bushel oranges.
A Friend . . . . .	2 pairs shoes, 4 pairs rubbers.
A Friend . . . . .	1 dozen jellies.
Mrs. J. C. Abbott . . . . .	2 jackets and underwear.
Mrs. J. Stearn . . . . .	1 child's sweater.
"In Memory of Dorothy" . .	9 knitted babies' bonnets.
A Friend . . . . .	Old linen.
A Friend . . . . .	A long heavy cloak.
A Friend . . . . .	Old linen.
Jacob Dreyfus & Sons . . . .	1 dozen pairs woolen gloves.
E. MacMulkin . . . . .	Flowers.
Mr. F. Rosenberg . . . . .	25 pairs shoes.
Brigham's Bakery . . . . .	10 loaves bread.
A Friend . . . . .	Fur-lined coat, fur-lined gloves, 1 pair bed shoes, 4 pairs leg- gings, 1 bath robe, 1 flannel sleeping robe, 2 rugs, 1 shawl, 3 sleeping bags, 2 pairs flannel drawers, 1 flannel shirt, 2 flannel night gowns, 1 pair bloomers.



